说明：

LinuxPlus.org给朋友的实验手册均是一个“骨架”。我们希望您在学习过程中，根据自己实验将其补充完整，从而形成自己专属的、更加详实的手册。

请详细精读oVirt官方文档的《快速启动指南》

http://www.ovirt.org/documentation/quickstart/quickstart-guide/

This document is a step-by-step guide for first-time users to install and configure a basic oVirt environment and create virtual machines.

# 要求

## oVirt Engine

* 最低要求：双核CPU、4 GB RAM、25 GB自由空间、1个Gbps网卡。
* 推荐配置：两路4核CPU、16 GB RAM, 50 GB 自由空间、1个Gbps网卡。下层操作系统的要求：

Fedora 19 至少1 GB RAM和10 GB本地空间

CentOS 6.5至少1 GB RAM和5 GB本地空间

oVirt Engine: 至少3 GB RAM、3 GB本地空间和1-Gbps网卡。

如果想在oVirt引擎服务器上创建 ISO域，还需要至少15GB磁盘空间。

* oVirt引擎必须配置通过oVirt项目软件仓库进行更新，以便使用与操作系统版本匹配的oVirt相关的软件包。
* 连接到oVirt引擎的客户端

## Host（oVirt节点, Fedora Host, CentOS Host）

* 最低要求：双核CPU、10 GB RAM、10 GB存储、1个Gbps网卡
* 推荐配置：双路CPU、16GB RAM、50 GB存储、2个1-Gbps网卡
  + 支持AMD-V或 Intel VT技术的CPU
  + 每个虚拟机至少1GB内存

## 存储和网络

* 至少一个支持的存储（NFS, iSCSI, FCP, Local, POSIX FS, GlusterFS）
  + NFS：一个有效IP地址和export路径
  + iSCSI：一个有效IP地址和Target信息
* oVirt引擎和主机均要有一个静态IP地址
* 可以进行正向和反向解析的的DNS服务器
* 可以为虚拟机分配IP地址的DHCP服务器

## 虚拟机

虚拟机操作系统安装的镜像

# 规划设计



VIP地址192.168.1.170

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **主机** | **角色** | **LAN** | **Corosync** | **Storage** |
| ovirt1 | 引擎 | 192.168.1.170 |  | 10.0.1.170 |
| tomkvm1 | 节点 | 192.168.1.171 | 172.16.1.171 | 10.0.1.171 |
| tomkvm2 | 节点 | 192.168.1.172 | 172.16.1.172 | 10.0.1.172 |
| tomnode3 | 节点 | 192.168.1.173 |  |  |
| tomstor1 | NFS服务器 | 192.168.1.175 |  | 10.0.1.175 |
| zzdc1 | 域控制器 | 192.168.1.11 |  |  |

我的在UCS服务器的存储目录为：/vm/tomlab/

配置DNS服务上的正向及反向解析。

**[root@ovrt1 ~]# nslookup tomovirt1.linuxplus.local**

Server: 192.168.1.11

Address: 192.168.1.11#53

Name: ovirt1.linuxplus.local

Address: 192.168.1.170

**[root@ovrt1 ~]# nslookup tomkvm1.linuxplus.local**

Server: 192.168.1.11

Address: 192.168.1.11#53

Name: tomkvm1.linuxplus.local

Address: 192.168.1.171

**[root@ovrt1 ~]# nslookup tomkvm1.linuxplus.local**

Server: 192.168.1.11

Address: 192.168.1.11#53

Name: tomkvm1.linuxplus.local

Address: 192.168.1.171

**[root@ovrt1 ~]# nslookup tomstor1.linuxplus.local**

Server: 192.168.1.11

Address: 192.168.1.11#53

Name: tomstor1.linuxplus.local

Address: 192.168.1.175

**[root@ovrt1 ~]# nslookup 192.168.1.170**

Server: 192.168.1.11

Address: 192.168.1.11#53

180.1.168.192.in-addr.arpa name = tomovirt1.linuxplus.local.

**[root@ovrt1 ~]# nslookup 192.168.1.171**

Server: 192.168.1.11

Address: 192.168.1.11#53

181.1.168.192.in-addr.arpa name = tomkvm1.linuxplus.local.

**[root@ovrt1 ~]# nslookup 192.168.1.172**

Server: 192.168.1.11

Address: 192.168.1.11#53

182.1.168.192.in-addr.arpa name = tomkvm2.linuxplus.local.

**[root@ovrt1 ~]# nslookup 192.168.1.175**

Server: 192.168.1.11

Address: 192.168.1.11#53

185.1.168.192.in-addr.arpa name = tomstor1.linuxplus.local.

在引擎的主机的/etc/resolv.conf中添加search linuxplus.local

# oVirt安装

oVirt平台至少要有一个oVirt引擎和一个节点。

* 引擎提供一个管理物理和逻辑资源的Web图形界面的管理工具。通过FireFox等浏览器来访问
* 节点上运行虚拟机

## 安装oVirt引擎

### 操作系统准备

**# virt-install --name=tomovirt1 \**

**--disk device=disk,bus=virtio,path='/vm/tomlab/tomovrit1\_disk0.qcow2' \**

**--cdrom='/iso/CentOS-7-x86\_64-DVD-1511.iso' \**

**--vcpus=4 --ram=4096 \**

**--network bridge=br0,model=virtio \**

**--graphics vnc \**

**--os-type=linux \**

**--os-variant=rhel7 --boot hd**

修改一下网络配置：

<interface type='network'>

<mac address='52:54:00:1d:9a:6d'/>

<source network='Internal'/>

<model type='virtio'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x08' function='0x0'/>

</interface>

<interface type='bridge'>

<mac address='52:54:00:19:85:f9'/>

<source bridge='br0'/>

<model type='virtio'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x03' function='0x0'/>

</interface>

使用以下kickstart文件来简化安装。

|  |
| --- |
| #version=DEVEL  # System authorization information  auth --enableshadow --passalgo=sha512  # Use CDROM installation media  cdrom  # Use text mode install  text  # Firewall configuration  firewall --disabled  # Run the Setup Agent on first boot  firstboot --enable  ignoredisk --only-use=vda  # Keyboard layouts  keyboard --vckeymap=us --xlayouts='us'  # System language  lang en\_US.UTF-8  # Network information  network --bootproto=dhcp --noipv6  network --bootproto=dhcp --hostname=localhost.localdomain  # Reboot after installation  reboot  # Root password  rootpw --plaintext 123456  # SELinux configuration  selinux --disabled  # Do not configure the X Window System  skipx  # System timezone  timezone Asia/Shanghai --isUtc  # System bootloader configuration  bootloader --append=" crashkernel=auto" --location=mbr --boot-drive=vda  autopart --type=lvm  # Partition clearing information  clearpart --none --initlabel  #最小化安装  %packages  @base  @core  kexec-tools  net-tools  %end  %addon com\_redhat\_kdump --enable --reserve-mb='auto'  %end |

再添加两块网卡

**# virsh attach-interface --domain ovirt1 --type network --source Internal --model virtio --config**

**# cat /etc/redhat-release**

CentOS Linux release 7.2.1511 (Core)

**# uname -a**

Linux ovrt1 3.10.0-327.el7.x86\_64 #1 SMP Thu Nov 19 22:10:57 UTC 2015 x86\_64 x86\_64 x86\_64 GNU/Linux

生产环境中，建议进行操作系统升级

**# yum -y update**

**# reboot**

### 安装oVirt引擎

#### 标准安装

修改yum配置，启用cache，以方便日后实验。

**# vi /etc/yum.conf**

修改keepcache=0为keepcache=1

1、添加官方的oVirt repository.

**# yum -y install** [**http://resources.ovirt.org/pub/yum-repo/ovirt-release40.rpm**](http://resources.ovirt.org/pub/yum-repo/ovirt-release40.rpm)

这将安装ovirt-release40-4.0.4-1.noarch，会创建新的仓库配置文件

**# ll /etc/yum.repos.d/**

total 36

-rw-r--r--. 1 root root 1664 Dec 9 2015 CentOS-Base.repo

-rw-r--r--. 1 root root 1309 Dec 9 2015 CentOS-CR.repo

-rw-r--r--. 1 root root 649 Dec 9 2015 CentOS-Debuginfo.repo

-rw-r--r--. 1 root root 290 Dec 9 2015 CentOS-fasttrack.repo

-rw-r--r--. 1 root root 630 Dec 9 2015 CentOS-Media.repo

-rw-r--r--. 1 root root 1331 Dec 9 2015 CentOS-Sources.repo

-rw-r--r--. 1 root root 1952 Dec 9 2015 CentOS-Vault.repo

-rw-r--r-- 1 root root 1674 Nov 1 14:46 ovirt-4.0-dependencies.repo

-rw-r--r-- 1 root root 289 Nov 1 14:46 ovirt-4.0.repo

2、安装oVirt引擎软件包

**# yum -y install ovirt-engine**

这将安装226个包，大约M。特别是最后几个包比较大，可能会花比较长的时间。

实验环境中建议备份一下，包括复制yum的cache中的rpm包。

3、设置oVirt引擎

安装时，主要是配置以下内容

* 网络配置：服务器DNS名称、防火墙等
* 数据库配置：postgresql自动启动等
* 引擎配置：Admin密码、应用角色、默认存储类型等
* PKI配置：证书等
* Apache配置：SSL、默认页等
* 系统配置：包括WebSocket Proxy、NFS、ISO域路径及ACL等

设置程序的使用[]中的内容为默认值。

安装时，一定要注意以下几点：

* HTTP、HTTPS使用的80和443端口是可以访问的
* 如果选择了配置NFS共享，会自动创建export
* 选择的存储用于创建数据中心和群集，然后通过Web管理门户来附件存储
* ISO\_DOMAIN默认的NFS许可仅允许当前主机访问。将来需要为主机配置读写的许可。

配置引擎。研究一下命令行，可以通过配置来进行安装的

# engine-setup --help

Usage: /usr/bin/engine-setup

--log=file

write log to this file.

--config=file

Load configuration files.

--config-append=file

Load extra configuration files or answer file.

--offline

Offline mode.

--generate-answer=file

Generate answer file.

--reconfigure-optional-components

Ask again about components that were disabled in previous run.

--jboss-home=dir

Use this jboss.

--reconfigure-dwh-scale

If DWH is configured, allow changing its scale.

**[root@ovrt1 ~]# engine-setup**

[ INFO ] Stage: Initializing

[ INFO ] Stage: Environment setup

Configuration files: ['/etc/ovirt-engine-setup.conf.d/10-packaging-jboss.conf', '/etc/ovirt-engine-setup.conf.d/10-packaging.conf']

Log file: /var/log/ovirt-engine/setup/ovirt-engine-setup-20161101165601-1kqkzr.log

Version: otopi-1.5.2 (otopi-1.5.2-1.el7.centos)

[ INFO ] Stage: Environment packages setup

[ INFO ] Yum Status: Downloading Packages

[ INFO ] Yum Download/Verify: iproute-3.10.0-54.el7\_2.1.x86\_64

[ INFO ] Yum Status: Check Package Signatures

[ INFO ] Yum Status: Running Test Transaction

[ INFO ] Yum Status: Running Transaction

[ INFO ] Yum update: 1/2: iproute-3.10.0-54.el7\_2.1.x86\_64

[ INFO ] Yum updated: 2/2: iproute

[ INFO ] Yum Verify: 1/2: iproute.x86\_64 0:3.10.0-54.el7\_2.1 - u

[ INFO ] Yum Verify: 2/2: iproute.x86\_64 0:3.10.0-54.el7 - ud

[ INFO ] Stage: Programs detection

[ INFO ] Stage: Environment setup

[ INFO ] Stage: Environment customization

--== PRODUCT OPTIONS ==--

Configure Engine on this host (Yes, No) [Yes]:

Configure Image I/O Proxy on this host? (Yes, No) [Yes]:

Configure WebSocket Proxy on this host (Yes, No) [Yes]:

Please note: Data Warehouse is required for the engine. If you choose to not configure it on this host, you have to configure it on a remote host, and then configure the engine on this host so that it can access the database of the remote Data Warehouse host.

Configure Data Warehouse on this host (Yes, No) [Yes]:

Configure VM Console Proxy on this host (Yes, No) [Yes]:

--== PACKAGES ==--

[ INFO ] Checking for product updates...

[ INFO ] No product updates found

--== NETWORK CONFIGURATION ==--

Host fully qualified DNS name of this server [ovrt1]: tomovirt1.linuxplus.local 🡨 注意，要输入全限定域名FQDN

|  |
| --- |
| BTW: 如果oVirt引擎主机上配置了resolv.conf中的search,那么会自动出现FQDN  Host fully qualified DNS name of this server [tomovirt1.linuxplus.local]: |

Host fully qualified DNS name of this server [tomovirt1.linuxplus.local]:

Setup can automatically configure the firewall on this system.

Note: automatic configuration of the firewall may overwrite current settings.

Do you want Setup to configure the firewall? (Yes, No) [Yes]:

[ INFO ] firewalld will be configured as firewall manager.

如果这一步出错，说明firewalld没有启用。再开一个新的会话，启用它。

|  |
| --- |
| **[root@ovrt1 ~]# systemctl start firewalld**  **[root@ovrt1 ~]# systemctl enable firewalld** |

--== DATABASE CONFIGURATION ==--

Where is the DWH database located? (Local, Remote) [Local]:

Setup can configure the local postgresql server automatically for the DWH to run. This may conflict with existing applications.

Would you like Setup to automatically configure postgresql and create DWH database, or prefer to perform that manually? (Automatic, Manual) [Automatic]:

Where is the Engine database located? (Local, Remote) [Local]:

Setup can configure the local postgresql server automatically for the engine to run. This may conflict with existing applications.

Would you like Setup to automatically configure postgresql and create Engine database, or prefer to perform that manually? (Automatic, Manual) [Automatic]:

--== OVIRT ENGINE CONFIGURATION ==--

Engine admin password: 输入密码，123456

Confirm engine admin password: 再次输入

[WARNING] Password is weak: it is too simplistic/systematic

Use weak password? (Yes, No) [No]: yes 太简单了，强制使用

Application mode (Virt, Gluster, Both) [Both]:

--== STORAGE CONFIGURATION ==--

Default SAN wipe after delete (Yes, No) [No]:

|  |
| --- |
| **SANWipeAfterDelete**：Initializing disk image is more secure but it is time consuming and I/O intensive (depends on the size of the image) String Represents the default value (checked/unchecked) of the "wipe after delete" check-box in the "New Virtual Disk" dialog in case the newly-created Disk belongs to a SAN (FC/iSCSI) Data-Center (i.e. about to be created on a SAN storage domain). |

这与V3版本不同！

--== PKI CONFIGURATION ==--

Organization name for certificate [linuxplus.local]:

--== APACHE CONFIGURATION ==--

Setup can configure the default page of the web server to present the application home page. This may conflict with existing applications.

Do you wish to set the application as the default page of the web server? (Yes, No) [Yes]:

Setup can configure apache to use SSL using a certificate issued from the internal CA.

Do you wish Setup to configure that, or prefer to perform that manually? (Automatic, Manual) [Automatic]:

--== SYSTEM CONFIGURATION ==--

Configure an NFS share on this server to be used as an ISO Domain? (Yes, No) [No]: yes 使用ISO domain

Local ISO domain path [/var/lib/exports/iso]:

Please provide the ACL for the Local ISO domain.

See the exports(5) manpage for the format.

Examples:

- To allow access for host1, host2 and host3, input: host1(rw) host2(rw) host3(rw)

- To allow access to the entire Internet, input: \*(rw)

For more information, see: http://www.ovirt.org/Troubleshooting\_NFS\_Storage\_Issues

Local ISO domain ACL: \*(rw)我设置的比较宽泛

Local ISO domain name [ISO\_DOMAIN]:

--== MISC CONFIGURATION ==--

Please choose Data Warehouse sampling scale:

(1) Basic

(2) Full

(1, 2)[1]:

--== END OF CONFIGURATION ==--

[ INFO ] Stage: Setup validation

[WARNING] Cannot validate host name settings, reason: cannot resolve own name 'ovrt1'

|  |
| --- |
| 出现这个问题，在/etc/resolv.conf中添加search linuxplus.local  **[root@ovrt1 ~]# nslookup tomovirt1**  Server: 192.168.1.11  Address: 192.168.1.11#53  Name: tomovirt1.linuxplus.local  Address: 192.168.1.170 |

如果内存小于4GB，会有这样警告

|  |
| --- |
| [WARNING] Warning: Not enough memory is available on the host. Minimum requirement is 4096MB, and 16384MB is recommended.  Do you want Setup to continue, with amount of memory less than recommended? (Yes, No) [No]: yes |

[WARNING] Less than 16384MB of memory is available

--== CONFIGURATION PREVIEW ==--

Application mode : both

Default SAN wipe after delete : False

Firewall manager : firewalld

Update Firewall : True

Host FQDN : ovirt1.linuxplus.local

Engine database secured connection : False

Engine database host : localhost

Engine database user name : engine

Engine database name : engine

Engine database port : 5432

Engine database host name validation : False

DWH database secured connection : False

DWH database host : localhost

DWH database user name : ovirt\_engine\_history

DWH database name : ovirt\_engine\_history

DWH database port : 5432

DWH database host name validation : False

Engine installation : True

NFS setup : True

PKI organization : linuxplus.local

NFS export ACL : \*(rw)

NFS mount point : /var/lib/exports/iso

Configure local Engine database : True

Set application as default page : True

Configure Apache SSL : True

DWH installation : True

Configure local DWH database : True

Engine Host FQDN : ovirt1.linuxplus.local

Configure Image I/O Proxy : True

Configure VMConsole Proxy : True

Configure WebSocket Proxy : True

Please confirm installation settings (OK, Cancel) [OK]:

检查上述配置，没有问题后，回车

[ INFO ] Stage: Transaction setup

[ INFO ] Stopping engine service

[ INFO ] Stopping ovirt-fence-kdump-listener service

[ INFO ] Stopping dwh service

[ INFO ] Stopping Image I/O Proxy service

[ INFO ] Stopping websocket-proxy service

[ INFO ] Stage: Misc configuration

[ INFO ] Stage: Package installation

[ INFO ] Stage: Misc configuration

[ INFO ] Upgrading CA

[ INFO ] Initializing PostgreSQL

[ INFO ] Creating PostgreSQL 'engine' database

[ INFO ] Configuring PostgreSQL

[ INFO ] Creating PostgreSQL 'ovirt\_engine\_history' database

[ INFO ] Configuring PostgreSQL

[ INFO ] Creating CA

[ INFO ] Creating/refreshing Engine database schema

这个时间比较长。从另外一个会话tail-f日志看到，这与PostgreSQL配置有关

[ INFO ] Creating/refreshing DWH database schema

[ INFO ] Configuring Image I/O Proxy

[ INFO ] Setting up ovirt-vmconsole proxy helper PKI artifacts

[ INFO ] Setting up ovirt-vmconsole SSH PKI artifacts

[ INFO ] Configuring WebSocket Proxy

[ INFO ] Creating/refreshing Engine 'internal' domain database schema

这个时间会更长。

[ INFO ] Generating post install configuration file '/etc/ovirt-engine-setup.conf.d/20-setup-ovirt-post.conf'

[ INFO ] Stage: Transaction commit

[ INFO ] Stage: Closing up

[ INFO ] Starting engine service

[ INFO ] Restarting nfs services

[ INFO ] Starting dwh service

[ INFO ] Restarting ovirt-vmconsole proxy service

--== SUMMARY ==--

[ INFO ] Restarting httpd

Please use the user 'admin@internal' and password specified in order to login

Web access is enabled at:

http://ovirt1.linuxplus.local:80/ovirt-engine

<https://ovirt1.linuxplus.local:443/ovirt-engine>

管理门户的地址

Internal CA 11:81:56:4B:19:3C:24:52:B2:93:7C:F2:94:41:E9:30:79:25:03:FA

SSH fingerprint: 01:0a:ac:4b:0b:0e:73:12:2a:e4:d6:48:f7:90:ff:88

[WARNING] Less than 16384MB of memory is available

提示内存有些少

--== END OF SUMMARY ==--

[ INFO ] Stage: Clean up

Log file is located at /var/log/ovirt-engine/setup/ovirt-engine-setup-20161101170409-g8sui1.log

[ INFO ] Generating answer file '/var/lib/ovirt-engine/setup/answers/20161101173010-setup.conf'

[ INFO ] Stage: Pre-termination

[ INFO ] Stage: Termination

[ INFO ] Execution of setup completed successfully

#### 快速安装

将之前的安装的保存cach 复制到新的机器上

**# mount 192.168.1.13:/SOFTWARE /mnt/nfs**

**# mkdir -p /var/cache/yum/x86\_64/7/**

**# cd /var/cache/yum/x86\_64/7/**

**[root@tomovirt1 7]# cp -r /mnt/nfs/KVM/ovirt-4.0-CentOS7/\* .**

**[root@tomovirt1 7]# yum -y install ovirt-engine**

Loaded plugins: fastestmirror, langpacks

base | 3.6 kB 00:00:00

centos-ovirt40-release | 3.4 kB 00:00:00

extras | 3.4 kB 00:00:00

ovirt-4.0 | 2.9 kB 00:00:00

ovirt-4.0-centos-gluster37 | 2.9 kB 00:00:00

ovirt-4.0-epel/x86\_64/metalink | 5.5 kB 00:00:00

ovirt-4.0-epel | 4.3 kB 00:00:00

ovirt-4.0-patternfly1-noarch-epel | 3.0 kB 00:00:00

updates | 3.4 kB 00:00:00

virtio-win-stable | 3.0 kB 00:00:00

(1/2): ovirt-4.0-epel/x86\_64/updateinfo | 671 kB 00:00:06

(2/2): ovirt-4.0-epel/x86\_64/primary\_db | 4.3 MB 00:00:59

Loading mirror speeds from cached hostfile

……

Install 1 Package (+215 Dependent packages)

Total size: 475 M

Total download size: 122 k

Installed size: 1.0 G

Downloading packages:下载了几个包，还是很快的

(1/5): libXrender-0.9.8-2.1.el7.x86\_64.rpm | 25 kB 00:00:01

(2/5): libXrandr-1.4.2-2.el7.x86\_64.rpm | 26 kB 00:00:01

(3/5): libXinerama-1.1.3-2.1.el7.x86\_64.rpm | 14 kB 00:00:01

(4/5): libXfixes-5.0.1-2.1.el7.x86\_64.rpm | 18 kB 00:00:02

(5/5): libXext-1.3.3-3.el7.x86\_64.rpm | 39 kB 00:00:06

#### 排错

Log file is located at /var/log/ovirt-engine/setup/ovirt-engine-setup-20161112224609-i3ah5i.log

[ INFO ] Generating answer file '/var/lib/ovirt-engine/setup/answers/20161112225618-setup.conf'

[ INFO ] Stage: Pre-termination

[ INFO ] Stage: Termination

[ INFO ] Execution of setup completed successfully

Error in atexit.\_run\_exitfuncs:

Traceback (most recent call last):

File "/usr/lib64/python2.7/atexit.py", line 24, in \_run\_exitfuncs

func(\*targs, \*\*kargs)

OSError: [Errno 2] No such file or directory: '/tmp/tmpULMXgr'

Error in atexit.\_run\_exitfuncs:

Traceback (most recent call last):

File "/usr/lib64/python2.7/atexit.py", line 24, in \_run\_exitfuncs

func(\*targs, \*\*kargs)

OSError: [Errno 2] No such file or directory: '/tmp/tmp4pY6pE'

Error in atexit.\_run\_exitfuncs:

Traceback (most recent call last):

File "/usr/lib64/python2.7/atexit.py", line 24, in \_run\_exitfuncs

func(\*targs, \*\*kargs)

OSError: [Errno 2] No such file or directory: '/tmp/tmpzJ5kt\_'

Error in sys.exitfunc:

Traceback (most recent call last):

File "/usr/lib64/python2.7/atexit.py", line 24, in \_run\_exitfuncs

func(\*targs, \*\*kargs)

OSError: [Errno 2] No such file or directory: '/tmp/tmpzJ5kt\_'

原来的内存是2GB，将虚拟机关闭，设置为4GB，然后重新运行engine-setup

会自动继续，原来的确定的参数不需要再进行确认了。

### 研究安装结果

安装完毕后，考察一下安装结果。

安装程序添加了几个新的用户

**[root@ovrt1 ~]# tail /etc/passwd**

tcpdump:x:72:72::/:/sbin/nologin

postgres:x:26:26:PostgreSQL Server:/var/lib/pgsql:/bin/bash

rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin

apache:x:48:48:Apache:/usr/share/httpd:/sbin/nologin

vdsm:x:36:36:Node Virtualization Manager:/:/sbin/nologin

ovirt:x:108:108:oVirt Manager:/var/lib/ovirt-engine:/sbin/nologin

hsqldb:x:96:96::/var/lib/hsqldb:/sbin/nologin

rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin

nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin

ovirt-vmconsole:x:994:991:oVirt VM Console:/usr/share/ovirt-vmconsole/empty:/bin/sh

Tip: VDSM是 虚拟 桌面 服务器 管理器 的缩写

**# systemctl status**

安装程序添加了一些服务，例如：

httpd.service

ovirt-websocket-proxy.service

ovirt-vmconsole-proxy-sshd.service

ovirt-imageio-proxy.service

ovirt-engine-dwhd.service

rpcbind.service

nfs-idmapd.service

nfs-mountd.service

ovirt-engine.service

ovirt-fence-kdump-listener.service

postgresql.service

查看NFS的配置

**[root@ovrt1 ~]# cat /etc/exports**

是空的！

**[root@ovrt1 ~]# showmount -e localhost**

Export list for localhost:

/var/lib/exports/iso \*

思考：这说明什么？oVirt没有通过系统的NFS配置文件来配置NFS的export目录

查看防火墙

**[root@ovrt1 ~]# iptables -L**

Chain INPUT (policy ACCEPT)

target prot opt source destination

ACCEPT all -- anywhere anywhere ctstate RELATED,ESTABLISHED

ACCEPT all -- anywhere anywhere

INPUT\_direct all -- anywhere anywhere

INPUT\_ZONES\_SOURCE all -- anywhere anywhere

INPUT\_ZONES all -- anywhere anywhere

ACCEPT icmp -- anywhere anywhere

REJECT all -- anywhere anywhere reject-with icmp-host-prohibited

Chain FORWARD (policy ACCEPT)

target prot opt source destination

ACCEPT all -- anywhere anywhere ctstate RELATED,ESTABLISHED

ACCEPT all -- anywhere anywhere

FORWARD\_direct all -- anywhere anywhere

FORWARD\_IN\_ZONES\_SOURCE all -- anywhere anywhere

FORWARD\_IN\_ZONES all -- anywhere anywhere

FORWARD\_OUT\_ZONES\_SOURCE all -- anywhere anywhere

FORWARD\_OUT\_ZONES all -- anywhere anywhere

ACCEPT icmp -- anywhere anywhere

REJECT all -- anywhere anywhere reject-with icmp-host-prohibited

Chain OUTPUT (policy ACCEPT)

target prot opt source destination

OUTPUT\_direct all -- anywhere anywhere

Chain FORWARD\_IN\_ZONES (1 references)

target prot opt source destination

FWDI\_public all -- anywhere anywhere [goto]

FWDI\_public all -- anywhere anywhere [goto]

FWDI\_public all -- anywhere anywhere [goto]

Chain FORWARD\_IN\_ZONES\_SOURCE (1 references)

target prot opt source destination

Chain FORWARD\_OUT\_ZONES (1 references)

target prot opt source destination

FWDO\_public all -- anywhere anywhere [goto]

FWDO\_public all -- anywhere anywhere [goto]

FWDO\_public all -- anywhere anywhere [goto]

Chain FORWARD\_OUT\_ZONES\_SOURCE (1 references)

target prot opt source destination

Chain FORWARD\_direct (1 references)

target prot opt source destination

Chain FWDI\_public (3 references)

target prot opt source destination

FWDI\_public\_log all -- anywhere anywhere

FWDI\_public\_deny all -- anywhere anywhere

FWDI\_public\_allow all -- anywhere anywhere

Chain FWDI\_public\_allow (1 references)

target prot opt source destination

Chain FWDI\_public\_deny (1 references)

target prot opt source destination

Chain FWDI\_public\_log (1 references)

target prot opt source destination

Chain FWDO\_public (3 references)

target prot opt source destination

FWDO\_public\_log all -- anywhere anywhere

FWDO\_public\_deny all -- anywhere anywhere

FWDO\_public\_allow all -- anywhere anywhere

Chain FWDO\_public\_allow (1 references)

target prot opt source destination

Chain FWDO\_public\_deny (1 references)

target prot opt source destination

Chain FWDO\_public\_log (1 references)

target prot opt source destination

Chain INPUT\_ZONES (1 references)

target prot opt source destination

IN\_public all -- anywhere anywhere [goto]

IN\_public all -- anywhere anywhere [goto]

IN\_public all -- anywhere anywhere [goto]

Chain INPUT\_ZONES\_SOURCE (1 references)

target prot opt source destination

Chain INPUT\_direct (1 references)

target prot opt source destination

Chain IN\_public (3 references)

target prot opt source destination

IN\_public\_log all -- anywhere anywhere

IN\_public\_deny all -- anywhere anywhere

IN\_public\_allow all -- anywhere anywhere

Chain IN\_public\_allow (1 references)

target prot opt source destination

ACCEPT tcp -- anywhere anywhere tcp dpt:synchronet-db ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:sunrpc ctstate NEW

ACCEPT udp -- anywhere anywhere udp dpt:sunrpc ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:pftp ctstate NEW

ACCEPT udp -- anywhere anywhere udp dpt:pftp ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:rquotad ctstate NEW

ACCEPT udp -- anywhere anywhere udp dpt:rquotad ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:892 ctstate NEW

ACCEPT udp -- anywhere anywhere udp dpt:892 ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:nfs ctstate NEW

ACCEPT udp -- anywhere anywhere udp dpt:filenet-rpc ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:32803 ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:https ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:http ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:EtherNet/IP-1 ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:ssh ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:54323 ctstate NEW

ACCEPT tcp -- anywhere anywhere tcp dpt:postgres ctstate NEW

ACCEPT udp -- anywhere anywhere udp dpt:ionixnetmon ctstate NEW

Chain IN\_public\_deny (1 references)

target prot opt source destination

Chain IN\_public\_log (1 references)

target prot opt source destination

Chain OUTPUT\_direct (1 references)

target prot opt source destination

### 测试引擎的访问

打开浏览器，输入<https://ovirt1.linuxplus.local>

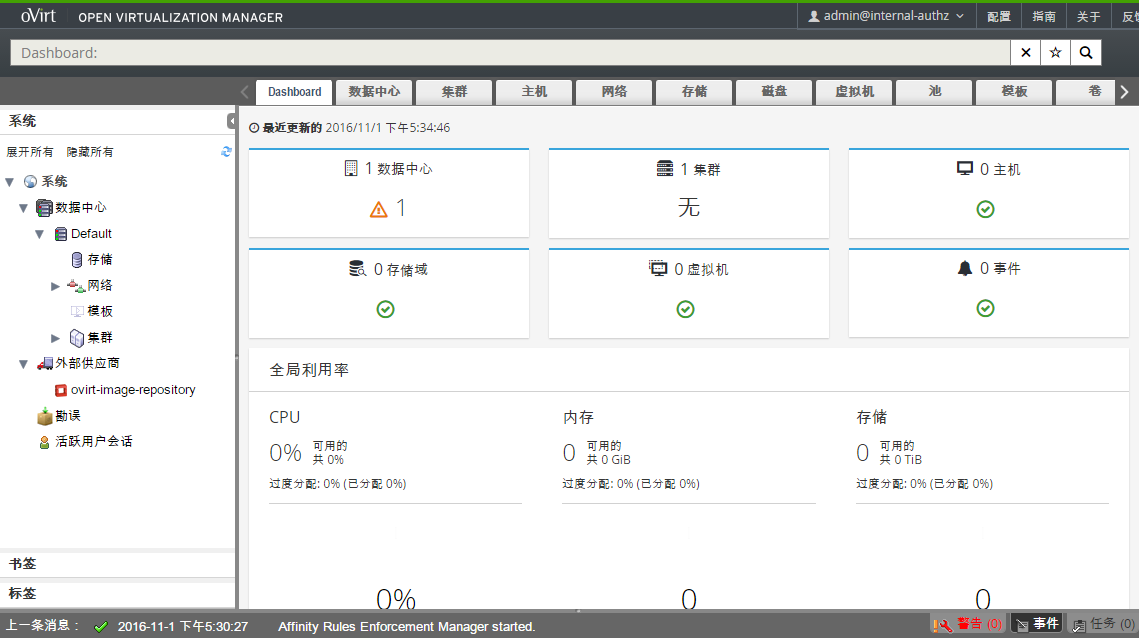
会自动跳转<https://ovirt1.linuxplus.local/ovirt-engine/>



由于使用的自签名的证书，所以浏览器会有安全警告。

思考：如果对外提供服务的虚拟化平台，规划要考虑服务器证书的配置。

进入管理门户



界面与V3版本的oVirt有很大的不同，特别是在仪表板的界面中。

### 安装的软件包

将通过yum安装时cache中的包，保存一下。

本次实验的保存位置：

[\\192.168.1.13\04软件\KVM\ovirt-4.0-CentOS7](file:///\\192.168.1.13\04软件\KVM\ovirt-4.0-CentOS7)

# 配置oVirt

## 添加Centos 7节点

对于oVirt Node，在安装的时候会自动向oVirt引擎注册，所以仅需要Approve即可。

而对于CentOS等发行版本的Host，需要手工来进行添加。

### TOMKVM1

如果直接添加主机，会出错。



在Host Delploy日志中也会看到：

2016-11-01 18:08:41 ERROR otopi.context context.\_executeMethod:151 Failed to execute stage 'Setup validation': Cannot locate vdsm package, possible cause is incorrect channels

也就是说，宿主机TOMKVM1找不到从VDSM安装包。

下面，我们在TOMKVM1上配置yum的仓库，安装oVirt官方仓库。

**# vi /etc/yum.conf**

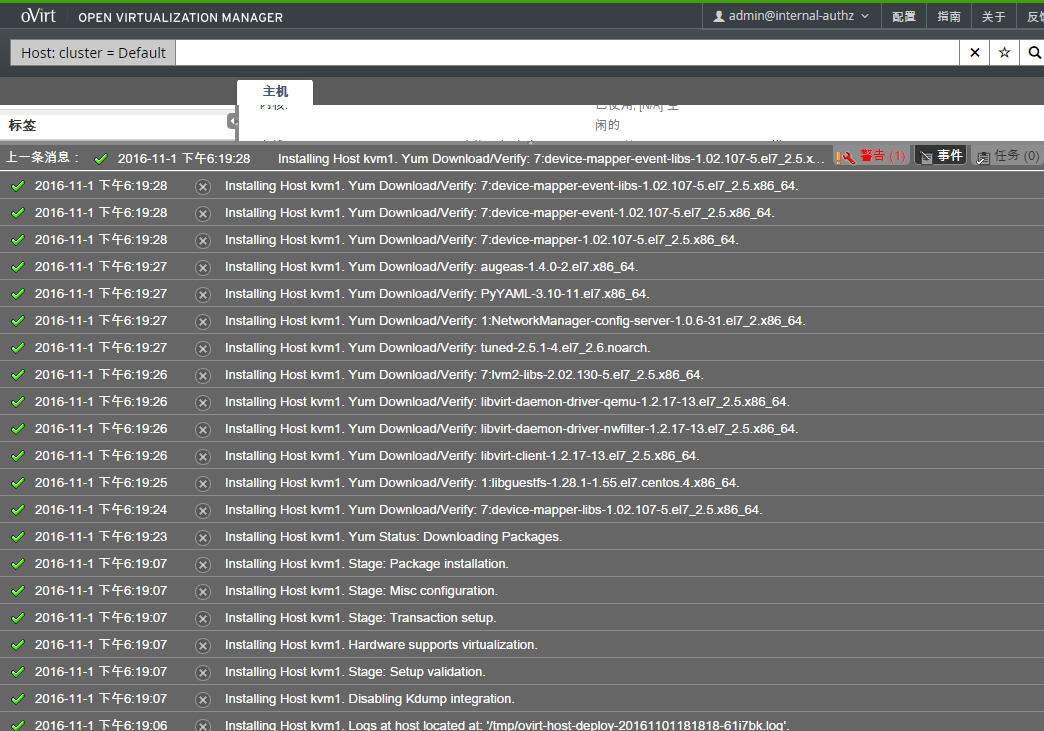
修改keepcache=0为keepcache=1

修改yum配置，启用cache，以方便日后实验。

添加官方的oVirt repository.

**# yum -y install** [**http://resources.ovirt.org/pub/yum-repo/ovirt-release40.rpm**](http://resources.ovirt.org/pub/yum-repo/ovirt-release40.rpm)

再添加主机，就很顺利。添加的过程中会看到有yum安装的动作。





最终，宿主机状态状态显示为Up。

### TOMKVM2

这次，我们尝试换一种方法，走一条新路来尝试一下。

直接先在主机上添加vdsm包。

[root@tomkvm2 ~]# yum -y install vdsm

但是在添加时，还是会出现需要安装一些软件包，不过要少很多了。

### 使用yum cache进行加速安装

在宿主机上安装VDSM相关的组件，还有另外一种做法：通过yum cache来安装。

**# vi /etc/yum.conf**

修改keepcache的值 1

将之前的安装的保存cach 复制到新的机器上

**# mount 192.168.1.13:/SOFTWARE /mnt/nfs**

**# mkdir -p /var/cache/yum/x86\_64/7/**

**# cd /var/cache/yum/x86\_64/7/**

**# cp -r /mnt/nfs/KVM/vdsm-4.0-CentOS7/\* .**

或

**[root@tomkvm2 7]# scp -r tomkvm1:/var/cache/yum/x86\_64/7/\* .**

**[root@tomkvm2 7]# ll**

total 44

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 base

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 centos-ovirt40-release

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 extras

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 ovirt-4.0

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 ovirt-4.0-centos-gluster37

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 ovirt-4.0-epel

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 ovirt-4.0-patternfly1-noarch-epel

-rw-------. 1 root root 229 Nov 3 18:28 timedhosts

-rwxr-xr-x. 1 root root 424 Nov 3 18:28 timedhosts.txt

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 updates

drwxr-xr-x. 4 root root 4096 Nov 3 18:28 virtio-win-stable

**yum -y install** [**http://resources.ovirt.org/pub/yum-repo/ovirt-release40.rpm**](http://resources.ovirt.org/pub/yum-repo/ovirt-release40.rpm)

### 安装的软件包

保证宿主机上的vdsm相关的软件包。

[\\192.168.1.13\04软件\KVM\vdsm-4.0-CentOS7](file:///\\192.168.1.13\04软件\KVM\vdsm-4.0-CentOS7)

## 添加oVirt Node

ovirt-node-ng-installer-ovirt-4.0-2016083011.iso

**在ZZKVM1上创建嵌套虚拟化**

**# cd /vm/tomlab/**

**# qemu-img create -f qcow2 tomnode3-disk0.qcow2 80G**

Formatting 'tomnode3-disk0.qcow2', fmt=qcow2 size=85899345920 encryption=off cluster\_size=65536 lazy\_refcounts=off

# mkdir /media/nfs

# mount 192.168.1.13:/SOFTWARE /media/nfs

**# cp /media/nfs/KVM/node/ovirt-node-ng-installer-ovirt-4.0-2016083011.iso /iso**

检查MD5的值。

**# md5sum /iso/ovirt-node-ng-installer-ovirt-4.0-2016083011.iso**

a5e29443cf7d5689748ff1b50939a748 /iso/ovirt-node-ng-installer-ovirt-4.0-2016083011.iso

**# cat /media/nfs/KVM/node/ovirt-node-ng-installer-ovirt-4.0-2016083011.iso.md5sum**

a5e29443cf7d5689748ff1b50939a748

一致，安装介质没有问题。

**virt-install --name=tomonode3 \**

**--disk device=disk,bus=virtio,path='/vm/tomlab/tomnode3-disk0.qcow2' \**

**--cdrom='/iso/ovirt-node-ng-installer-ovirt-4.0-2016083011.iso' \**

**--vcpus=4 --ram=4096 \**

**--network bridge=br0,model=virtio \**

**--graphics vnc \**

**--os-type=linux \**

**--os-variant=rhel7**

关闭虚拟机，修改配置文件

<cpu mode='custom' match='exact'>

<model fallback='allow'>Westmere</model>

</cpu>

编辑配置文件，删除原的CPU配置

<cpu mode='custom' match='exact'>

<model fallback='allow'>Westmere</model>

</cpu>

修改为

<cpu mode='host-passthrough'/>

根据向导进行安装。

如果安装时，没有配置网络。需要登录后，修改网络脚本配置文件。

磁盘为80GB，磁盘布局设置为自动。安装很顺利。

考察一下版本。

**# uname -a**

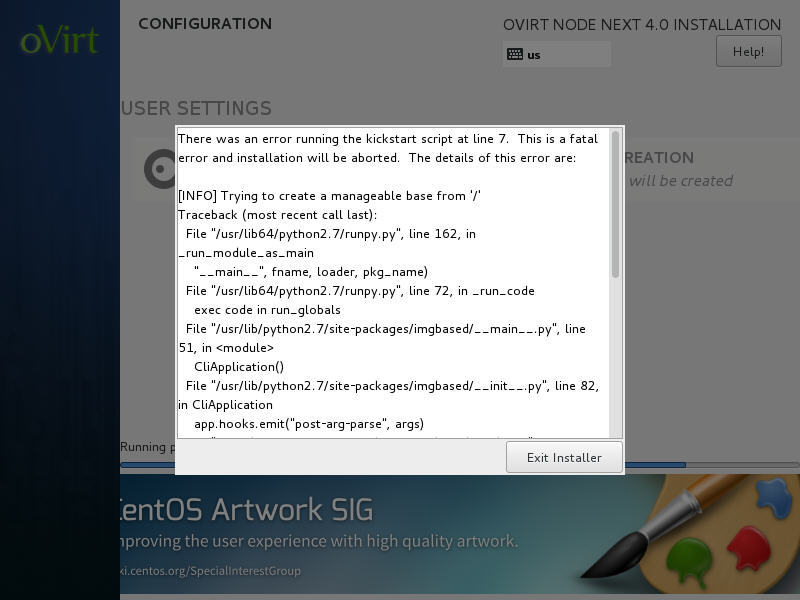
Linux localhost.localdomain 3.10.0-327.28.3.el7.x86\_64 #1 SMP Thu Aug 18 19:05:49 UTC 2016 x86\_64 x86\_64 x86\_64 GNU/Linux

**# cat /etc/redhat-release**

CentOS Linux release 7.2.1511 (Core)

### 排错

安装时出错。



启动后，登录后出现以下错误

|  |
| --- |
| Last login: Sat Nov 12 21:44:06 2016  imgbase status: DEGRADED  Please check the status manually using `imgbase check` |

应当时在安装时，分区创建不正确导致的。（实验环境中sda是20GB）

后来，sda配置为80GB，选择自动分区就没有问题了。

## 配置Data Domain和ISO\_Domain

在创建虚拟之前，我们创建Data Domain和确保ISO\_DOMAIN挂载的默认的群集上。

### 准备NFS服务器

#### 安装NFS服务器

**# cd /etc/yum.repos.d/**

**# mv CentOS-\* bak/**

**# cp bak/CentOS-Media.repo .**

**# vi CentOS-Media.repo**

**# mkdir -p /media/CentOS/**

**# mount /dev/cdrom /media/CentOS/**

**# yum -y install nfs-utils**

**# systemctl enable rpcbind**

**# systemctl start rpcbind**

**# systemctl enable nfs-server**

**# systemctl start nfs-server**

#### 为NFS配置防火墙

**# systemctl enable firewalld**

**# systemctl start firewalld**

**# firewall-cmd --list-services**

dhcpv6-client ssh

**# firewall-cmd --get-services**

RH-Satellite-6 amanda-client bacula bacula-client dhcp dhcpv6 dhcpv6-client dns freeipa-ldap freeipa-ldaps freeipa-replication ftp high-availability http https imaps ipp ipp-client ipsec iscsi-target kerberos kpasswd ldap ldaps libvirt libvirt-tls mdns mountd ms-wbt mysql nfs ntp openvpn pmcd pmproxy pmwebapi pmwebapis pop3s postgresql proxy-dhcp radius rpc-bind rsyncd samba samba-client smtp ssh telnet tftp tftp-client transmission-client vdsm vnc-server wbem-https

**# firewall-cmd --permanent --add-service=nfs**

**# firewall-cmd --permanent --add-service=rpc-bind**

**# firewall-cmd --permanent --add-service=mountd**

**# firewall-cmd –reload**

#### 测试NFS读写

**[root@tomstor1 ~]# fdisk /dev/vdb**

创建一个基本分区，使用全部，将其类型设置为8e，即LVM

**[root@tomstor1 ~]# fdisk -l /dev/vdb**

Disk /dev/vdb: 85.9 GB, 85899345920 bytes, 167772160 sectors

Units = sectors of 1 \* 512 = 512 bytes

Sector size (logical/physical): 512 bytes / 512 bytes

I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk label type: dos

Disk identifier: 0x8fd0fca4

Device Boot Start End Blocks Id System

/dev/vdb1 2048 167772159 83885056 8e Linux LVM

**[root@tomstor1 ~]# pvcreate /dev/vdb1**

**[root@tomstor1 ~]# vgcreate vgstor1 /dev/vdb1**

**[root@tomstor1 ~]# lvcreate -n lvnfs1 -l 100%FREE vgstor1**

**[root@tomstor1 ~]# lvscan**

ACTIVE '/dev/vgstor1/lvnfs1' [80.00 GiB] inherit

ACTIVE '/dev/centos/swap' [2.00 GiB] inherit

ACTIVE '/dev/centos/root' [37.46 GiB] inherit

**[root@tomstor1 ~]# mkfs.xfs /dev/vgstor1/lvnfs1**

**[root@tomstor1 ~]# mkdir /vm**

**[root@tomstor1 ~]# echo "/dev/vgstor1/lvnfs1 /vm xfs defaults 0 0" >> /etc/fstab**

**[root@tomstor1 ~]# mount /vm**

**[root@tomstor1 ~]# chmod a+w /vm**

**[root@tomstor1 ~]# echo "/vm \*(rw,no\_root\_squash,sync)" >> /etc/exports**

**[root@tomstor1 ~]# systemctl restart nfs-server**

**[root@tomstor1 ~]# systemctl restart nfs-server**

**[root@tomstor1 ~]# showmount -e localhost**

Export list for localhost:

/vm \*

在所有节点上测试到到NFS的连接，文件的读写。

*有可能需要*

*mount /dev/cdrom /media/CentOS/*

*yum -y install nfs-utils*

**[root@tomkvm1 ~]# mkdir /vm**

**[root@tomkvm1 ~]# showmount -e 10.0.1.175**

Export list for 10.0.1.175:

/vm \*

**[root@tomkvm1 ~]# mount 10.0.1.175:/vm /vm**

**[root@tomkvm1 ~]# cp ~/anaconda-ks.cfg /vm/testtomkvm1.txt**

total 4

-rw-------. 1 nfsnobody nfsnobody 1259 Oct 12 16:48 testtomkvm1.txt

**[root@tomkvm1 ~]# vi /etc/fstab**

添加

10.0.1.175:/vm /vm nfs defaults 0 0

**节点2**

**[root@tomkvm2 ~]# mkdir /vm**

**[root@tomkvm2 ~]# mount 10.0.1.175:/vm /vm**

**[root@tomkvm2 ~]# ll /vm**

total 4

-rw-------. 1 nfsnobody nfsnobody 1259 Oct 12 16:48 testtomkvm1.txt

**[root@tomkvm2 ~]# cp /vm/testtomkvm1.txt /vm/testtomkvm2.txt**

**[root@tomkvm2 ~]# ll /vm**

total 8

-rw-------. 1 nfsnobody nfsnobody 1259 Oct 12 16:48 testtomkvm1.txt

-rw-------. 1 nfsnobody nfsnobody 1259 Oct 12 16:49 testtomkvm2.txt

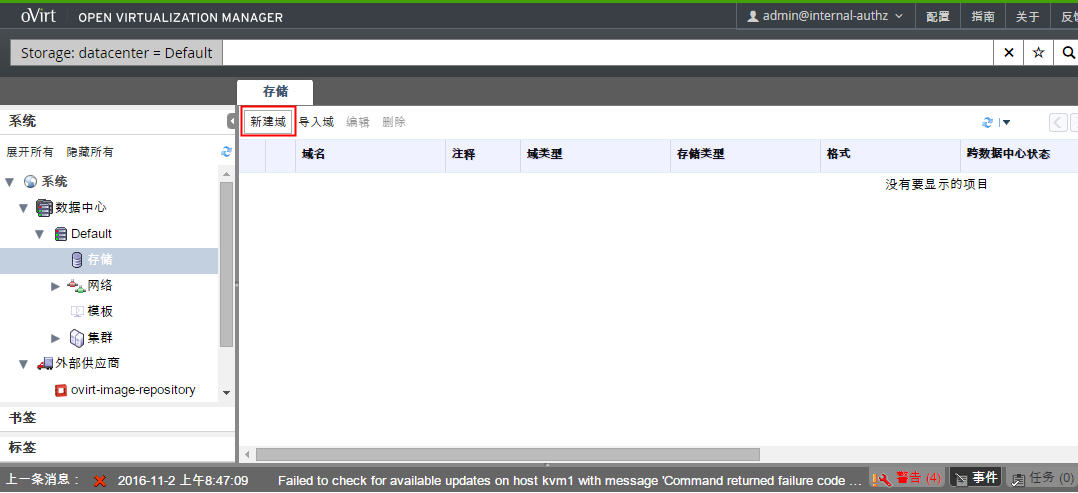
**[root@tomkvm2 ~]# vi /etc/fstab**

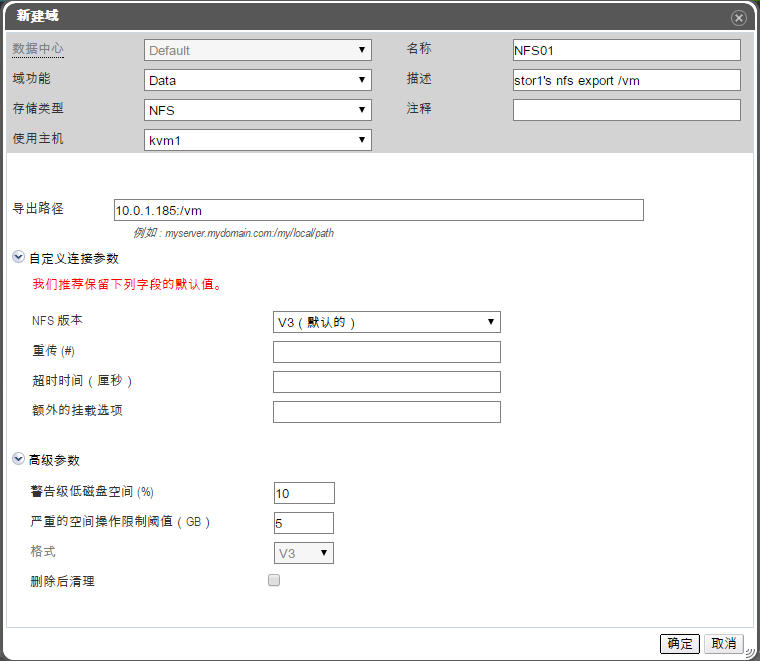
添加

10.0.1.175:/vm /vm nfs defaults 0 0

### 添加新的Domain

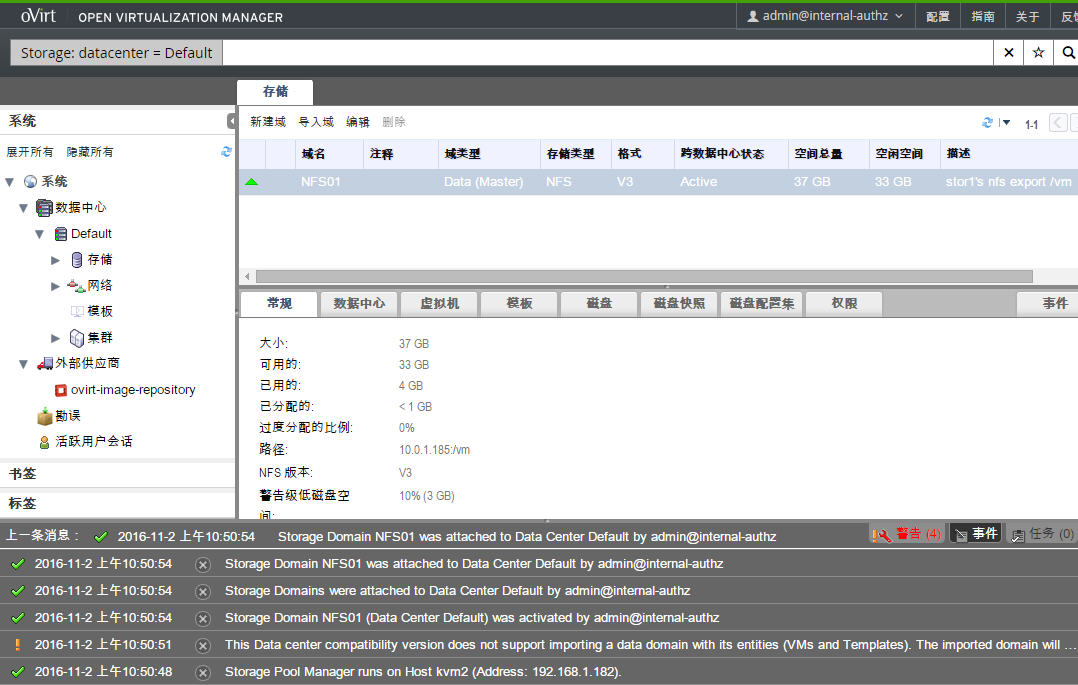
System -> Storage -> New Domain







等一会，数据中心的状态会从Locked变成Acitve，前面的图标，也会从锁变成UP



#### 考察操作的结果

在TOMKVM1、TOMKVM2上均会将NFS进行mount操作

**[root@tomkvm1 ~]# mount**

……

10.0.1.175:/vm on /rhev/data-center/mnt/10.0.1.175:\_vm type nfs (rw,relatime,vers=3,rsize=131072,wsize=131072,namlen=255,soft,nosharecache,proto=tcp,timeo=600,retrans=6,sec=sys,mountaddr=10.0.1.175,mountvers=3,mountport=20048,mountproto=udp,local\_lock=none,addr=10.0.1.175)

但是，在/etc/fstab中没有NFS的配置。

### 挂载ISO Domain

在设置引擎时，我们配置的ISO Domain

|  |
| --- |
| --== SYSTEM CONFIGURATION ==--  Configure an NFS share on this server to be used as an ISO Domain? (Yes, No) [No]: yes 使用ISO domain  Local ISO domain path [/var/lib/exports/iso]:  Please provide the ACL for the Local ISO domain.  See the exports(5) manpage for the format.  Examples:  - To allow access for host1, host2 and host3, input: host1(rw) host2(rw) host3(rw)  - To allow access to the entire Internet, input: \*(rw)  For more information, see: http://www.ovirt.org/Troubleshooting\_NFS\_Storage\_Issues  Local ISO domain ACL: \*(rw)我设置的比较宽泛  Local ISO domain name [ISO\_DOMAIN]: |

这会在oVirt引擎上创建一个NFS的export目录，但是在/etc/exports中配置的。

**[root@ovrt1 ~]# cat /etc/exports**

空白

**[root@ovrt1 ~]# showmount -e localhost**

Export list for localhost:

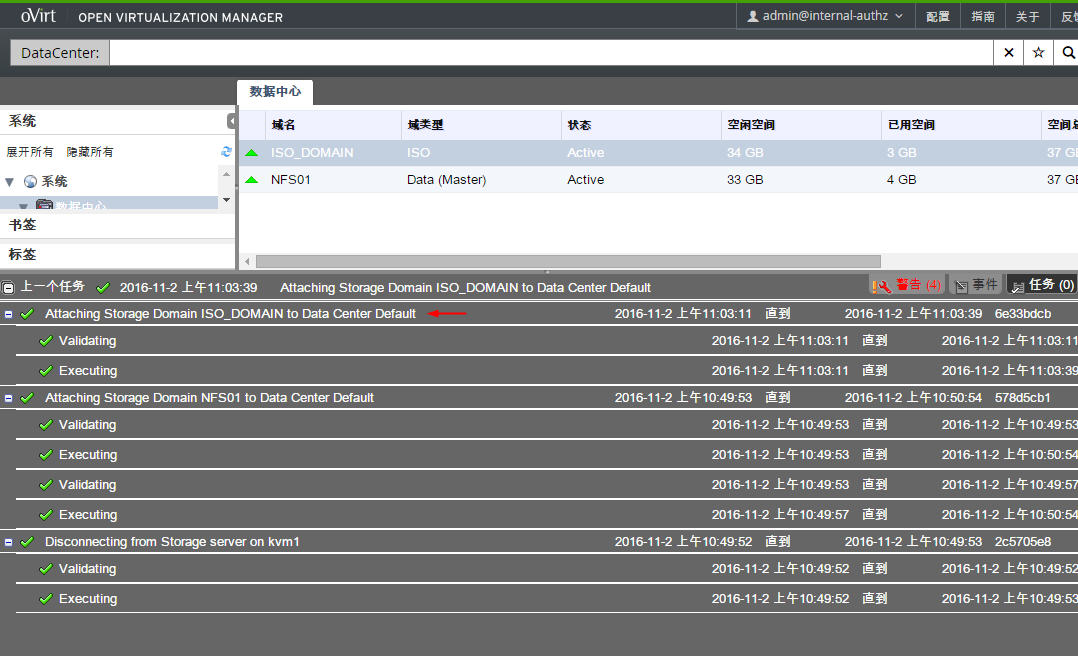
/var/lib/exports/iso \*

System -> 数据中心，下面我们进行**附加ISO**操作





等一会，状态从**Locked**变成**Active**



查看，**任务**中的信息。



#### 考察操作的结果

在TOMKVM1、TOMKVM2上均会将NFS进行mount操作，将oVirt引擎上的NFS目录，mount到/rhev/data-center/mnt/ovirt1.linuxplus.local:\_var\_lib\_exports\_iso中。

**[root@tomkvm1 ~]# mount**

……

ovirt1.linuxplus.local:/var/lib/exports/iso on /rhev/data-center/mnt/ovirt1.linuxplus.local:\_var\_lib\_exports\_iso type nfs (rw,relatime,vers=3,rsize=524288,wsize=524288,namlen=255,soft,nosharecache,proto=tcp,timeo=600,retrans=6,sec=sys,mountaddr=192.168.1.170,mountvers=3,mountport=892,mountproto=udp,local\_lock=none,addr=192.168.1.170)

### 上传ISO文件



到了4.0，oVirt还没有提供GUI的ISO上传工具，还需要在oVirt引擎上，通过命令行工具ovirt-iso-uploader来上传。

**[root@ovrt1 ~]# mkdir /mnt/nfs**

**[root@ovrt1 ~]# mount 192.168.1.13:/SOFTWARE /mnt/nfs**

**[root@ovrt1 ~]# ovirt-iso-uploader --help**

Usage: ovirt-iso-uploader [options] list

ovirt-iso-uploader [options] upload FILE [FILE]...[FILE]

The ISO uploader can be used to list ISO storage domains and upload files to storage domains. The upload operation supports multiple files (separated by spaces) and wildcarding.

……

**[root@ovrt1 ~]# ovirt-iso-uploader list**

Please provide the REST API password for the admin@internal oVirt Engine user (CTRL+D to abort): 输入admin的密码

ISO Storage Domain Name | ISO Domain Status

ISO\_DOMAIN | ok

为了后续实验，咱们再上传两个ISO文件。

**[root@ovrt1 ~]# ovirt-iso-uploader upload -i ISO\_DOMAIN /mnt/nfs/Microsoft/OS/2003/W2K3\_VOL\_WITH\_SP2\_CN\_CREATE.ISO**

Please provide the REST API password for the admin@internal oVirt Engine user (CTRL+D to abort):

Uploading, please wait...

INFO: Start uploading /mnt/nfs/Microsoft/OS/2003/W2K3\_VOL\_WITH\_SP2\_CN\_CREATE.ISO

Uploading: [########################################] 100%

INFO: /mnt/nfs/Microsoft/OS/2003/W2K3\_VOL\_WITH\_SP2\_CN\_CREATE.ISO uploaded successfully

**[root@ovrt1 ~]# ovirt-iso-uploader upload -i ISO\_DOMAIN /mnt/nfs/CentOS/CentOS-6.4-i386-bin-DVD1.iso**

Please provide the REST API password for the admin@internal oVirt Engine user (CTRL+D to abort):

Uploading, please wait...

INFO: Start uploading /mnt/nfs/CentOS/CentOS-6.4-i386-bin-DVD1.iso

Uploading: [########################################] 100%

INFO: /mnt/nfs/CentOS/CentOS-6.4-i386-bin-DVD1.iso uploaded successfully

刷新一下，就会看到两个ISO文件了。



## 上传原有的KVM虚拟机

之前，我们的实验中创建过的虚拟机可以导入到oVirt平台中。

在生产环境中，也有可能会有类似的场景……

#### 证书签名的问题

如果oVirt引擎使用的是自签名的证书，需要就将其发行者添加操作的PC同上的**受信任的**根CA机构中。否则上传会失败。



Unable to upload image to disk due to a network error. Make sure ovirt-imageio-proxy service is installed and configured, and over-engine’s certificate is registered ads a valid CA in the browser.

以下是我排错过程。

1、是否为是ovirt-imageio-proxy服务没有启动？

**# systemctl status ovirt-**

oVirt开头的系统服务有这样一些：

ovirt-engine-dwhd.service

ovirt-engine.service

ovirt-imageio-proxy.service

ovirt-websocket-proxy.service

ovirt-engine-notifier.service ovirt-fence-kdump-listener.service ovirt-vmconsole-proxy-sshd.service

**# systemctl status ovirt-imageio-proxy.service**

● ovirt-imageio-proxy.service - oVirt ImageIO Proxy

Loaded: loaded (/usr/lib/systemd/system/ovirt-imageio-proxy.service; enabled; vendor preset: disabled)

Active: active (running) since Thu 2016-11-03 17:50:47 CST; 20h ago

Main PID: 25088 (ovirt-imageio-p)

CGroup: /system.slice/ovirt-imageio-proxy.service

└─25088 /usr/bin/python /usr/bin/ovirt-imageio-proxy

Nov 03 17:50:47 tomovirt1 systemd[1]: Starting oVirt ImageIO Proxy...

Nov 03 17:50:47 tomovirt1 systemd[1]: Started oVirt ImageIO Proxy.

2、这个服务在运行，那么是证书上的问题？

自签名的根证书。从以下面位置下载安装根证书，上传就没有问题了。

https://%your\_engine%/ovirt-engine/services/pki-resource?resource=ca-certificate&format=X509-PEM-CA

https://tomovirt1.linuxplus.local/ovirt-engine/services/pki-resource?resource=ca-certificate&format=X509-PEM-CA

#### 镜像格式的问题

镜像上传结束后，又出现另外一个问题了。



VDSM tomkvm1 command failed: Image verification failed: "reason=qcow2 compat u'1.1' not supported by this host"

通过qemu-img info看一下这个镜像的版本

|  |
| --- |
| Format specific information:  compat: 1.1  lazy refcounts: false |

Uploading an image with qcow2 compat 1.1 is unsupported for storage format type v3.

不支持兼容1.1版本的镜像。下面，我们使用qemu-img的命令来修改一下镜像的版本。

|  |
| --- |
| amend [-f fmt] [-t cache] -o options filename  Amends the image format specific options for the image file filename. Not all file formats support this operation.  "compat"  Determines the qcow2 version to use. "compat=0.10" uses the traditional image format that can be read by any QEMU since 0.10. "compat=1.1" enables image format extensions that only QEMU 1.1 and newer understand (this is the default). Amongst others, this includes zero clusters, which allow efficient copy-on-read for sparse images. |

**[root@zzkvm1 vm]# qemu-img info centos7-1511-disk0.qcow2**

image: centos7-1511-disk0.qcow2

file format: qcow2

virtual size: 10G (10737418240 bytes)

disk size: 1.3G

cluster\_size: 65536

Format specific information:

compat: 1.1

lazy refcounts: false

**[root@zzkvm1 vm]# cp centos7-1511-disk0.qcow2 centos7-1511-compat0.10.qcow2**

**[root@zzkvm1 vm]# qemu-img amend -f qcow2 -o compat=0.10 centos7-1511-compat0.10.qcow2**

因为是对文件头部的进行修改，所以这个速度特别快！

**[root@zzkvm1 vm]# qemu-img info centos7-1511-compat0.10.qcow2**

image: centos7-1511-compat0.10.qcow2

file format: qcow2

virtual size: 10G (10737418240 bytes)

disk size: 1.3G

cluster\_size: 65536

Format specific information:

compat: 0.10

对比一下，文件基本没有变化。

**[root@zzkvm1 vm]# ll centos7-1511-\***

-rw-r--r--. 1 root root 1355022336 Nov 4 15:41 centos7-1511-compat0.10.qcow2

-rw-r--r--. 1 qemu qemu 1355022336 May 3 2016 centos7-1511-disk0.qcow2

上传镜像很成功。

## 配置网络

oVirt安装程序会在在默认数据中心中会一个管理网络。这个网络用管理工具与宿主机之间通信。为Guest、存储或显示创建新的网络，可以提高性能和事情。宿主机使用的网络，必须先添加到数据中心中。



在数据中心中添加了主机之前，网络配置为：

[root@tomkvm2 ~]# ip address

1: lo: <LOOPBACK,UP,LOWER\_UP> mtu 65536 qdisc noqueue state UNKNOWN

link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00

inet 127.0.0.1/8 scope host lo

valid\_lft forever preferred\_lft forever

inet6 ::1/128 scope host

valid\_lft forever preferred\_lft forever

2: eth0: <BROADCAST,MULTICAST,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast state UP qlen 1000

link/ether 52:54:00:a0:92:cd brd ff:ff:ff:ff:ff:ff

inet 192.168.1.172/24 brd 192.168.1.255 scope global eth0

valid\_lft forever preferred\_lft forever

inet6 fe80::5054:ff:fea0:92cd/64 scope link

valid\_lft forever preferred\_lft forever

3: eth1: <BROADCAST,MULTICAST,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast state UP qlen 1000

link/ether 52:54:00:74:5e:16 brd ff:ff:ff:ff:ff:ff

inet 172.16.1.172/24 brd 172.16.1.255 scope global eth1

valid\_lft forever preferred\_lft forever

inet6 fe80::5054:ff:fe74:5e16/64 scope link

valid\_lft forever preferred\_lft forever

4: eth2: <BROADCAST,MULTICAST,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast state UP qlen 1000

link/ether 52:54:00:0e:d8:6c brd ff:ff:ff:ff:ff:ff

inet 10.0.1.172/24 brd 10.0.1.255 scope global eth2

valid\_lft forever preferred\_lft forever

inet6 fe80::5054:ff:fe0e:d86c/64 scope link

valid\_lft forever preferred\_lft forever

5: virbr0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN

link/ether 52:54:00:68:af:e4 brd ff:ff:ff:ff:ff:ff

inet 192.168.122.1/24 brd 192.168.122.255 scope global virbr0

valid\_lft forever preferred\_lft forever

6: virbr0-nic: <BROADCAST,MULTICAST> mtu 1500 qdisc pfifo\_fast master virbr0 state DOWN qlen 500

link/ether 52:54:00:68:af:e4 brd ff:ff:ff:ff:ff:ff

添加到引擎中后，我们研究一下其网络。

**[root@tomkvm1 ~]# ifconfig**

eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

ether 52:54:00:19:85:f9 txqueuelen 1000 (Ethernet)

RX packets 45919 bytes 5893673 (5.6 MiB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 20114 bytes 213753548 (203.8 MiB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

……

ovirtmgmt: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

inet 192.168.1.171 netmask 255.255.255.0 broadcast 192.168.1.255

ether 52:54:00:19:85:f9 txqueuelen 0 (Ethernet)

RX packets 45862 bytes 5247693 (5.0 MiB)

RX errors 0 dropped 1 overruns 0 frame 0

TX packets 20107 bytes 213753006 (203.8 MiB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

新增加了一名为ovirtmgmt的网卡连接,eth0没有IP地址了！

**[root@tomkvm1 ~]# ll /etc/sysconfig/network-scripts/**

total 264

drwxr-xr-x. 2 root root 23 Oct 12 14:22 bak

-rw-rw-r--. 1 root root 127 Nov 1 18:26 ifcfg-eth0

-rw-r--r--. 1 root root 110 Oct 9 13:49 ifcfg-eth1

-rw-r--r--. 1 root root 108 Oct 9 13:49 ifcfg-eth2

-rw-r--r--. 1 root root 254 Sep 16 2015 ifcfg-lo

-rw-rw-r--. 1 root root 252 Nov 1 18:26 ifcfg-ovirtmgmt

……

考察两个网络接口的配置脚本文件，发现是桥接模式。

**[root@tomkvm1 ~]# cat /etc/sysconfig/network-scripts/ifcfg-eth0**

# Generated by VDSM version 4.18.13-1.el7.centos

DEVICE=eth0

BRIDGE=ovirtmgmt

ONBOOT=yes

MTU=1500

NM\_CONTROLLED=no

IPV6INIT=no

**[root@tomkvm1 ~]# cat /etc/sysconfig/network-scripts/ifcfg-ovirtmgmt**

# Generated by VDSM version 4.18.13-1.el7.centos

DEVICE=ovirtmgmt

TYPE=Bridge

DELAY=0

STP=off

ONBOOT=yes

IPADDR=192.168.1.171

NETMASK=255.255.255.0

GATEWAY=192.168.1.1

BOOTPROTO=none

MTU=1500

DEFROUTE=yes

NM\_CONTROLLED=no

IPV6INIT=no

DNS1=192.168.1.11

**[root@tomkvm1 ~]# brctl show**

bridge name bridge id STP enabled interfaces

;vdsmdummy; 8000.000000000000 no

ovirtmgmt 8000.5254001985f9 no eth0

我们通过virsh来查看一下。

**[root@tomkvm1 ~]# virsh iface-list**

Please enter your authentication name:

Please enter your password:

error: failed to connect to the hypervisor

error: no valid connection

error: authentication failed: Failed to step SASL negotiation: -1 (SASL(-1): generic failure: All-whitespace username.)

这与之前virsh操作不同，期原因是vdsm在加入oVirt时会使用SASL再次加密libvirt。

SASL全称Simple Authentication and Security Layer，是一种用来扩充C/S模式验证能力的机制。

安装程序在/etc/libvirt/libvirtd.conf文件的尾部，添加了如下内容：

|  |
| --- |
| ## beginning of configuration section by vdsm-4.17.0  auth\_unix\_rw="sasl"  ca\_file="/etc/pki/vdsm/certs/cacert.pem"  cert\_file="/etc/pki/vdsm/certs/vdsmcert.pem"  host\_uuid="84b4ad7c-c9c3-4286-8d2c-e259ff9e7fdf"  keepalive\_interval=-1  key\_file="/etc/pki/vdsm/keys/vdsmkey.pem"  unix\_sock\_group="qemu"  unix\_sock\_rw\_perms="0770"  ## end of configuration section by vdsm-4.17.0 |

这个文件中有这样一段话

# - sasl: use SASL infrastructure. The actual auth scheme is then

# controlled from /etc/sasl2/libvirt.conf. For the TCP

# socket only GSSAPI & DIGEST-MD5 mechanisms will be used.

# For non-TCP or TLS sockets, any scheme is allowed.

**[root@tomkvm1 ~]# cat /etc/sasl2/libvirt.conf**

文件的尾部有这一样一行。

sasldb\_path: /etc/libvirt/passwd.db

我们来研究一下这个文件

**[root@tomkvm1 ~]# ll /etc/libvirt/passwd.db**

-rw-------. 1 root root 12288 Nov 2 12:14 /etc/libvirt/passwd.db

**[root@tomkvm1 ~]# cat /etc/libvirt/passwd.db**

不是一个纯文本文件，不过也能看到一些信息。

**[root@tomkvm1 ~]# file /etc/libvirt/passwd.db**

/etc/libvirt/passwd.db: Berkeley DB (Hash, version 9, native byte-order)

**[root@tomkvm1 ~]# sasldblistusers2 -f /etc/libvirt/passwd.db**

vdsm@ovirt: userPassword

tom@tomkvm1: userPassword

Libvirt的验证，请参考<http://libvirt.org/auth.html>

下面，我们使用工具saslpasswd2来创建用户

**[root@tomkvm1 ~]# saslpasswd2**

This product includes software developed by Computing Services

at Carnegie Mellon University (http://www.cmu.edu/computing/).

saslpasswd2: usage: saslpasswd2 [-v] [-c [-p] [-n]] [-d] [-a appname] [-f sasldb] [-u DOM] userid

-p pipe mode -- no prompt, password read on stdin

-c create -- ask mechs to create the account

-d disable -- ask mechs to disable/delete the account

-n no userPassword -- don't set plaintext userPassword property

(only set mechanism-specific secrets)

-f sasldb use given file as sasldb

-a appname use appname as application name

-u DOM use DOM for user domain

-v print version numbers and exit

**[root@tomkvm1 ~]# saslpasswd2 -a libvirt tom**

其中，-a 参数跟着 appname，这里我们需要指定的是libvirt服务

Password: 密码

Again (for verification): 再次输入

这样就可以了

**virsh # list**

Please enter your authentication name: tom

Please enter your password:

Id Name State

----------------------------------------------------

**virsh # iface-list**

Name State MAC Address

---------------------------------------------------

eth1 active 52:54:00:1d:9a:6d

eth2 active 52:54:00:f9:b3:9e

lo active 00:00:00:00:00:00

ovirtmgmt active 52:54:00:19:85:f9

**virsh # net-list**

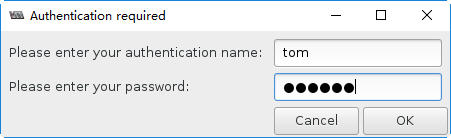
Name State Autostart Persistent

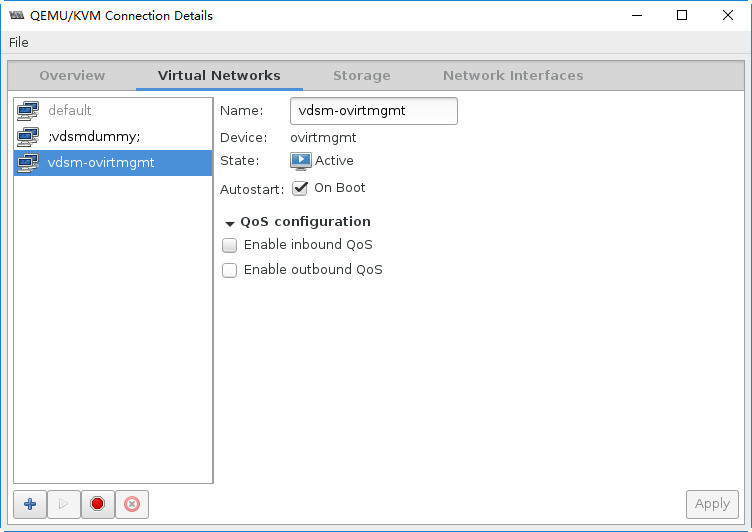
----------------------------------------------------------

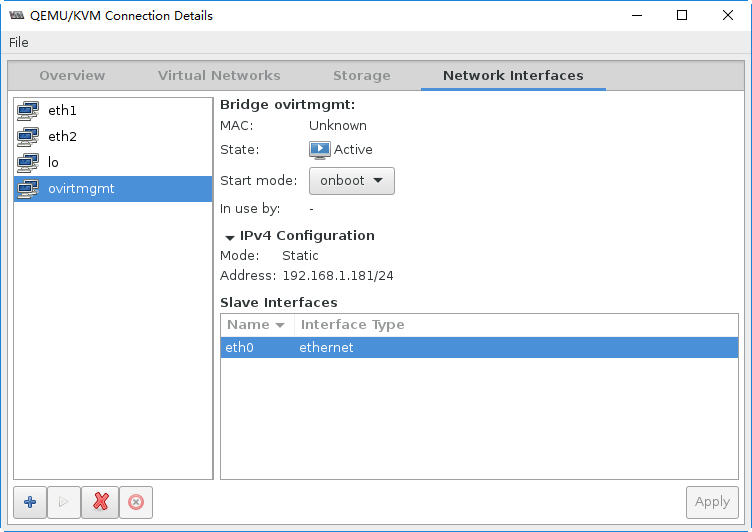
;vdsmdummy; active no no

vdsm-ovirtmgmt active yes yes

使用virt-manager也类似，不过需要等一会才会出现让输入用户名及密码。







### 排错

通过saslpasswd2配置过的了密码，但是还是出错。

**[root@tomkvm1 ~]# virsh list**

Please enter your authentication name: tom

Please enter your password:

error: failed to connect to the hypervisor

error: authentication failed: authentication failed

查看日志

Nov 7 11:38:44 tomkvm1 journal: authentication failed: Failed to start SASL negotiation: -20 (SASL(-13): user not found: unable to canonify user and get auxprops)

Nov 7 11:38:44 tomkvm1 journal: authentication failed: authentication failed

Nov 7 11:38:44 tomkvm1 journal: End of file while reading data: Input/output error

Failed to start SASL negotiation user not found: unable to canonify user and get auxprops

Unable to connect to libvirt.

authentication failed: authentication failed

Libvirt URI is: qemu:///system

Traceback (most recent call last):

File "/usr/share/virt-manager/virtManager/connection.py", line 862, in \_do\_open

self.\_backend.open(self.\_do\_creds\_password)

File "/usr/share/virt-manager/virtinst/connection.py", line 161, in open

open\_flags)

File "/usr/lib64/python2.7/site-packages/libvirt.py", line 105, in openAuth

if ret is None:raise libvirtError('virConnectOpenAuth() failed')

libvirtError: authentication failed: authentication failed

最后，在官方管理文档中，看到这样一段话：

Libvirt on Virtualization Hosts Read access to libvirt using the virsh -r command is a supported method of interacting with virtualization hosts. Write access is not supported.

《oVirt Administration Guide20160531》P5

# 创建虚拟机

在oVirt中，您即可以全新创建虚拟机，也可以通过已经存在的模板来克隆虚拟机。在创建的时候，你可能通过ISO镜像文件、PXE和磁盘来进行安装。

## Windows 2003

### 安装虚拟机

### 考察安装结果

**virsh # list**

Id Name State

----------------------------------------------------

2 w2k3a running

**virsh # edit w2k3a**

|  |
| --- |
| <domain type='kvm'>  <name>w2k3a</name>  <uuid>63448f7f-5f17-4b58-8b50-6a760c710c9d</uuid>  <metadata xmlns:ovirt="http://ovirt.org/vm/tune/1.0">  <ovirt:qos/>  </metadata>  <maxMemory slots='16' unit='KiB'>20971520</maxMemory>  <memory unit='KiB'>524288</memory>  <currentMemory unit='KiB'>524288</currentMemory>  <vcpu placement='static' current='1'>16</vcpu>  <cputune>  <shares>1020</shares>  </cputune>  <resource>  <partition>/machine</partition>  </resource>  <sysinfo type='smbios'>  <system>  <entry name='manufacturer'>oVirt</entry>  <entry name='product'>oVirt Node</entry>  <entry name='version'>7-2.1511.el7.centos.2.10</entry>  <entry name='serial'>55F50304-AF8D-4EC4-8849-1D875721E08A</entry>  <entry name='uuid'>63448f7f-5f17-4b58-8b50-6a760c710c9d</entry>  </system>  </sysinfo>  <os>  <type arch='x86\_64' machine='pc-i440fx-rhel7.2.0'>hvm</type>  <smbios mode='sysinfo'/>  </os>  <features>  <acpi/>  <hyperv>  <relaxed state='on'/>  <vapic state='on'/>  <spinlocks state='on' retries='8191'/>  </hyperv>  </features>  <cpu mode='custom' match='exact'>  <model fallback='allow'>Westmere</model>  <topology sockets='16' cores='1' threads='1'/>  <numa>  <cell id='0' cpus='0' memory='524288' unit='KiB'/>  </numa>  </cpu>  <clock offset='variable' adjustment='0' basis='utc'>  <timer name='hypervclock' present='yes'/>  <timer name='rtc' tickpolicy='catchup'/>  <timer name='pit' tickpolicy='delay'/>  <timer name='hpet' present='no'/>  </clock>  <on\_poweroff>destroy</on\_poweroff>  <on\_reboot>restart</on\_reboot>  <on\_crash>destroy</on\_crash>  <devices>  <emulator>/usr/libexec/qemu-kvm</emulator>  <disk type='file' device='disk' snapshot='no'>  <driver name='qemu' type='raw' cache='none' error\_policy='stop' io='threads'/>  <source file='/rhev/data-center/58185f0e-034b-01bb-0147-0000000000bd/a3e55d3e-5d57-4687-9f97-74aaef8ef551/images/679b13e7-2f27-4ddd-bb25-94b0238d941a/270d1dff-33c3-4bee-b59a-3fbb3155c057'>  <seclabel model='selinux' labelskip='yes'/>  </source>  <target dev='hda' bus='ide'/>  <serial>679b13e7-2f27-4ddd-bb25-94b0238d941a</serial>  <boot order='1'/>  <address type='drive' controller='0' bus='0' target='0' unit='0'/>  </disk>  <disk type='file' device='cdrom'>  <driver name='qemu' type='raw'/>  <source file='/rhev/data-center/mnt/ovirt1.linuxplus.local:\_var\_lib\_exports\_iso/5bdfe67f-0666-4400-8528-d69792b5fbc9/images/11111111-1111-1111-1111-111111111111/W2K3\_VOL\_WITH\_SP2\_CN\_CREATE.ISO' startupPolicy='optional'>  <seclabel model='selinux' labelskip='yes'/>  </source>  <target dev='hdc' bus='ide'/>  <readonly/>  <boot order='2'/>  <address type='drive' controller='0' bus='1' target='0' unit='0'/>  </disk>  <controller type='virtio-serial' index='0' ports='16'>  <address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x0'/>  </controller>  <controller type='usb' index='0'>  <address type='pci' domain='0x0000' bus='0x00' slot='0x01' function='0x2'/>  </controller>  <controller type='pci' index='0' model='pci-root'/>  <controller type='ide' index='0'>  <address type='pci' domain='0x0000' bus='0x00' slot='0x01' function='0x1'/>  </controller>  <interface type='bridge'>  <mac address='00:1a:4a:16:01:51'/>  <source bridge='ovirtmgmt'/>  <model type='virtio'/>  <filterref filter='vdsm-no-mac-spoofing'/>  <link state='up'/>  <address type='pci' domain='0x0000' bus='0x00' slot='0x03' function='0x0'/>  </interface>  <channel type='unix'>  <source mode='bind' path='/var/lib/libvirt/qemu/channels/63448f7f-5f17-4b58-8b50-6a760c710c9d.com.redhat.rhevm.vdsm'/>  <target type='virtio' name='com.redhat.rhevm.vdsm'/>  <address type='virtio-serial' controller='0' bus='0' port='1'/>  </channel>  <channel type='unix'>  <source mode='bind' path='/var/lib/libvirt/qemu/channels/63448f7f-5f17-4b58-8b50-6a760c710c9d.org.qemu.guest\_agent.0'/>  <target type='virtio' name='org.qemu.guest\_agent.0'/>  <address type='virtio-serial' controller='0' bus='0' port='2'/>  </channel>  <input type='tablet' bus='usb'/>  <input type='mouse' bus='ps2'/>  <input type='keyboard' bus='ps2'/>  <graphics type='vnc' port='-1' autoport='yes' keymap='en-us' passwd='CcFjBjqoX0CN' passwdValidTo='2016-11-02T07:00:55'>  <listen type='network' network='vdsm-ovirtmgmt'/>  </graphics>  <video>  <model type='cirrus' vram='16384' heads='1'/>  <address type='pci' domain='0x0000' bus='0x00' slot='0x02' function='0x0'/>  </video>  <memballoon model='none'/>  </devices>  <seclabel type='dynamic' model='selinux' relabel='yes'>  <label>system\_u:system\_r:svirt\_t:s0:c858,c933</label>  <imagelabel>system\_u:object\_r:svirt\_image\_t:s0:c858,c933</imagelabel>  </seclabel>  </domain> |

**virsh # domblklist 2**

Target Source

------------------------------------------------

hda /rhev/data-center/58185f0e-034b-01bb-0147-0000000000bd/a3e55d3e-5d57-4687-9f97-74aaef8ef551/images/679b13e7-2f27-4ddd-bb25-94b0238d941a/270d1dff-33c3-4bee-b59a-3fbb3155c057

hdc /rhev/data-center/mnt/ovirt1.linuxplus.local:\_var\_lib\_exports\_iso/5bdfe67f-0666-4400-8528-d69792b5fbc9/images/11111111-1111-1111-1111-111111111111/W2K3\_VOL\_WITH\_SP2\_CN\_CREATE.ISO

文件名很长，很高深的样子。

**[root@tomkvm1 ~]# qemu-img info** /rhev/data-center/58185f0e-034b-01bb-0147-0000000000bd/a3e55d3e-5d57-4687-9f97-74aaef8ef551/images/679b13e7-2f27-4ddd-bb25-94b0238d941a/270d1dff-33c3-4bee-b59a-3fbb3155c057

image: /rhev/data-center/58185f0e-034b-01bb-0147-0000000000bd/a3e55d3e-5d57-4687-9f97-74aaef8ef551/images/679b13e7-2f27-4ddd-bb25-94b0238d941a/270d1dff-33c3-4bee-b59a-3fbb3155c057

file format: raw

virtual size: 5.0G (5368709120 bytes)

disk size: 851M

**[root@tomkvm1 ~]# ll -h /rhev/data-center/58185f0e-034b-01bb-0147-0000000000bd/a3e55d3e-5d57-4687-9f97-74aaef8ef551/images/679b13e7-2f27-4ddd-bb25-94b0238d941a/270d1dff-33c3-4bee-b59a-3fbb3155c057**

-rw-rw----. 1 vdsm kvm 5.0G Nov 2 15:12 /rhev/data-center/58185f0e-034b-01bb-0147-0000000000bd/a3e55d3e-5d57-4687-9f97-74aaef8ef551/images/679b13e7-2f27-4ddd-bb25-94b0238d941a/270d1dff-33c3-4bee-b59a-3fbb3155c057

**[root@tomkvm1 ~]# du -h /rhev/data-center/58185f0e-034b-01bb-0147-0000000000bd/a3e55d3e-5d57-4687-9f97-74aaef8ef551/images/679b13e7-2f27-4ddd-bb25-94b0238d941a/270d1dff-33c3-4bee-b59a-3fbb3155c057**

852M /rhev/data-center/58185f0e-034b-01bb-0147-0000000000bd/a3e55d3e-5d57-4687-9f97-74aaef8ef551/images/679b13e7-2f27-4ddd-bb25-94b0238d941a/270d1dff-33c3-4bee-b59a-3fbb3155c057

**[root@tomkvm1 ~]# ifconfig**

**……**

vnet0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

inet6 fe80::fc1a:4aff:fe16:151 prefixlen 64 scopeid 0x20<link>

ether fe:1a:4a:16:01:51 txqueuelen 500 (Ethernet)

RX packets 0 bytes 0 (0.0 B)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 0 bytes 0 (0.0 B)

TX errors 0 dropped 74 overruns 0 carrier 0 collisions 0

[root@tomkvm1 ~]# brctl show

bridge name bridge id STP enabled interfaces

;vdsmdummy; 8000.000000000000 no

ovirtmgmt 8000.5254001985f9 no eth0

vnet0

### 安装virtio驱动

方法1、在oVirt引擎上安装相应的软件包

[root@tomovirt1 ~]# yum list | grep virtio

virtio-win.noarch 0.1.126-2 virtio-win-stable

[root@tomovirt1 ~]# yum -y install virtio-win

大统30+M

[root@ovrt1 ~]# ovirt-iso-uploader upload -i ISO\_DOMAIN /mnt/nfs/KVM/virt-win/latest-virtio-0.1.126/virtio-win-0.1.126.iso

Please provide the REST API password for the admin@internal oVirt Engine user (CTRL+D to abort):

Uploading, please wait...

INFO: Start uploading /mnt/nfs/KVM/virt-win/latest-virtio-0.1.126/virtio-win-0.1.126.iso

Uploading: [########################################] 100%

INFO: /mnt/nfs/KVM/virt-win/latest-virtio-0.1.126/virtio-win-0.1.126.iso uploaded successfully

方法2：

上传驱动程序的软盘

# ovirt-iso-uploader upload -i ISO\_DOMAIN /mnt/nfs/KVM/virt-win/latest-virtio-0.1.126/virtio-win-0.1.126\_x86.vfd

选择**运行一次**。附加带有驱动程序的软盘镜像。



## 安装后的配置

Post Install Additions

Adding a few guest tools may improve your experience.

* oVirt Guest Agent allows oVirt to show the Memory and Network utilization of the VM, the IP address of the VM, the installed Applications, Enable Single Sign On (SSO) and more.
* Spice-vdagent allows for copy and paste support (text & image), better mouse functionality, and automatic adjustment of the screen resolution based on the size of your window.

Add the oVirt Guest Agent by following the directions at How to install the guest agent in Fedora

### CentOS上安装虚拟机工具

<http://www.ovirt.org/documentation/how-to/guest-agent/install-the-guest-agent-in-fedora/>

添加官方的oVirt repository.

# yum -y install http://resources.ovirt.org/pub/yum-repo/ovirt-release40.rpm

[root@localhost ~]# yum list | grep ovirt-guest

ovirt-guest-agent-common.noarch 1.0.12-3.el7 ovirt-4.0-epel

ovirt-guest-agent-gdm-plugin.noarch 1.0.12-3.el7 ovirt-4.0-epel

ovirt-guest-agent-pam-module.x86\_64 1.0.12-3.el7 ovirt-4.0-epel

ovirt-guest-tools-iso.noarch 4.0-1.fc23 ovirt-4.0

[root@localhost ~]#

[root@localhost ~]# yum -y install ovirt-guest-agent-common

Loaded plugins: fastestmirror, langpacks

Loading mirror speeds from cached hostfile

Installed:

ovirt-guest-agent-common.noarch 0:1.0.12-3.el7

Dependency Installed:

python-ethtool.x86\_64 0:0.8-5.el7 qemu-guest-agent.x86\_64 10:2.3.0-4.el7

systemctl enable ovirt-guest-agent.service

systemctl start ovirt-guest-agent.service

yum -y install ovirt-guest-tools-iso

sudo systemctl enable ovirt-guest-agent.service && sudo systemctl start ovirt-guest-agent.service

### Windows上安装虚拟机工具

在oVirt引擎上安装ovirt-guest-tools-iso，这个也是需要从oVirt管方仓库中下载安装。

**# yum -y install ovirt-guest-tools-iso**

**# rpm -qi ovirt-guest-tools-iso**

Name : ovirt-guest-tools-iso

Version : 4.0

Release : 1.fc23

Architecture: noarch

Install Date: Fri 04 Nov 2016 05:52:32 PM CST

Group : Unspecified

Size : 99446784

License : GPLv2 and GPLv2+ and ASL 2.0 and Zlib and MIT and Python and Platform SDK Redistributable EULA and Microsoft DDK Redistributable EULA

Signature : RSA/SHA1, Wed 22 Jun 2016 05:59:33 PM CST, Key ID ab8c4f9dfe590cb7

Source RPM : ovirt-guest-tools-iso-4.0-1.fc23.src.rpm

Build Date : Wed 22 Jun 2016 05:33:47 PM CST

Build Host : el6-vm09.phx.ovirt.org

Relocations : (not relocatable)

Packager : Lev Veyde <lveyde@redhat.com>

URL : http://www.ovirt.org/Features/oVirt\_Windows\_Guest\_Tools

Summary : oVirt Windows Guest Tools

Description :

Windows Guest tools ISO for oVirt Virtualization Manager.

**# rpm -ql ovirt-guest-tools-iso**

/usr/share/ovirt-guest-tools-iso

/usr/share/ovirt-guest-tools-iso/oVirt-toolsSetup\_4.0-1.fc23.iso

/usr/share/ovirt-guest-tools-iso/ovirt-tools-setup.iso

[root@tomovirt1 ~]# rpm -ql ovirt-guest-tools-iso

/usr/share/ovirt-guest-tools-iso

/usr/share/ovirt-guest-tools-iso/oVirt-toolsSetup\_4.0-1.fc23.iso

/usr/share/ovirt-guest-tools-iso/ovirt-tools-setup.iso

[root@tomovirt1 ~]# cd /usr/share/ovirt-guest-tools-iso/

[root@tomovirt1 ovirt-guest-tools-iso]# ll

total 97116

-rw-r--r-- 1 root root 99446784 Jun 22 17:33 oVirt-toolsSetup\_4.0-1.fc23.iso

lrwxrwxrwx 1 root root 31 Nov 4 18:05 ovirt-tools-setup.iso -> oVirt-toolsSetup\_4.0-1.fc23.iso

[root@tomovirt1 ovirt-guest-tools-iso]# ovirt-

ovirt-aaa-jdbc-tool ovirt-host-deploy ovirt-imageio-proxy ovirt-iso-uploader

ovirt-engine-extensions-tool ovirt-host-mgmt ovirt-image-uploader ovirt-shell

[root@tomovirt1 ovirt-guest-tools-iso]# ovirt-iso-uploader upload -i ISO\_DOMAIN oVirt-toolsSetup\_4.0-1.fc23.iso

Please provide the REST API password for the admin@internal oVirt Engine user (CTRL+D to abort):

Uploading, please wait...

INFO: Start uploading oVirt-toolsSetup\_4.0-1.fc23.iso

Uploading: [########################################] 100%

INFO: oVirt-toolsSetup\_4.0-1.fc23.iso uploaded successfully

[root@tomovirt1 ovirt-guest-tools-iso]#

## 导出域

在存储上配置一新的export目录

**[root@tomstor1 ~]# mkdir /exportdomain**

**[root@tomstor1 ~]# chmod a+w /exportdomain**

**[root@tomstor1 ~]# vi /etc/exports**

添加一行

/exportdomain \*(rw,no\_root\_squash,sync)

**[root@tomstor1 ~]# systemctl restart nfs**

**[root@tomstor1 ~]# showmount -e localhost**

Export list for localhost:

/exportdomain \*

/vm

# 使用模板

## CentOS模板

登录到要作为模板的虚拟机上，进行以下操作。

**[root@localhost ~]# touch /.unconfigured**

作一个未配置的标记

**[root@localhost ~]# rm -rf /etc/ssh/ssh\_host\_\***

**[root@localhost ~]# poweroff**

## Clone a Red Hat Enterprise Linux Virtual Machine

克隆虚拟机时，如果在**资源分配>存储分配**中**，**选择**克隆**，可以设置模式。



# 附录

## oVirt仓库中相关的软件包

**# yum list | grep ovirt**

\* ovirt-4.0: resources.ovirt.org

\* ovirt-4.0-epel: mirrors.tuna.tsinghua.edu.cn

ovirt-release40.noarch 4.0.4-1 @/ovirt-release40

centos-release-ovirt35.noarch 1.0-2.el7 extras

centos-release-ovirt36.noarch 1.0-3.el7.centos extras

centos-release-ovirt40.noarch 1.0-1.el7.centos extras

cockpit-ovirt-dashboard.noarch 0.10.6-1.3.6.el7.centos ovirt-4.0

cockpit-ovirt-uiplugin.noarch 0.10.6-1.3.6.el7.centos ovirt-4.0

ebay-cors-filter.noarch 1.0.1-3.el7 centos-ovirt40-release

ebay-cors-filter-javadoc.noarch 1.0.1-3.el7 centos-ovirt40-release

epel-release.noarch 7-8 ovirt-4.0-epel

glusterfs.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-api.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-api-devel.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-cli.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-client-xlators.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-coreutils.x86\_64 0.2.0-1.el7\_37 ovirt-4.0-centos-gluster37

glusterfs-devel.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-extra-xlators.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-fuse.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-ganesha.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-geo-replication.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-libs.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-rdma.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-resource-agents.noarch 3.7.16-1.el7 ovirt-4.0-centos-gluster37

glusterfs-server.x86\_64 3.7.16-1.el7 ovirt-4.0-centos-gluster37

heketi.x86\_64 1.0.2-1.el7 ovirt-4.0-centos-gluster37

heketi-devel.noarch 1.0.2-1.el7 ovirt-4.0-centos-gluster37

heketi-unit-test-devel.x86\_64 1.0.2-1.el7 ovirt-4.0-centos-gluster37

imgbased.noarch 0.8.5-1.el7 centos-ovirt40-release

ioprocess.x86\_64 0.16.1-1.el7 ovirt-4.0

ioprocess-debuginfo.x86\_64 0.16.1-1.el7 ovirt-4.0

java-ovirt-engine-sdk4.noarch 4.0.2-1.el7.centos ovirt-4.0

libcacard-devel-ev.x86\_64 10:2.3.0-31.el7.16.1 ovirt-4.0

libcacard-ev.x86\_64 10:2.3.0-31.el7.16.1 ovirt-4.0

libcacard-tools-ev.x86\_64 10:2.3.0-31.el7.16.1 ovirt-4.0

libgovirt.i686 0.3.3-1.el7\_2.4 updates

libgovirt.x86\_64 0.3.3-1.el7\_2.4 updates

libgovirt-devel.i686 0.3.3-1.el7\_2.4 updates

libgovirt-devel.x86\_64 0.3.3-1.el7\_2.4 updates

libntirpc.x86\_64 1.3.1-1.el7 ovirt-4.0-centos-gluster37

libntirpc-devel.x86\_64 1.3.1-1.el7 ovirt-4.0-centos-gluster37

libtomcrypt.x86\_64 1.17-23.el7 ovirt-4.0-epel

libtommath.x86\_64 0.42.0-4.el7 ovirt-4.0-epel

mom.noarch 0.5.6-1.el7 ovirt-4.0

nfs-ganesha.x86\_64 2.3.0-1.el7 ovirt-4.0-centos-gluster37

nfs-ganesha-gluster.x86\_64 2.3.0-1.el7 ovirt-4.0-centos-gluster37

nfs-ganesha-mount-9P.x86\_64 2.3.0-1.el7 ovirt-4.0-centos-gluster37

nfs-ganesha-nullfs.x86\_64 2.3.0-1.el7 ovirt-4.0-centos-gluster37

nfs-ganesha-proxy.x86\_64 2.3.0-1.el7 ovirt-4.0-centos-gluster37

nfs-ganesha-utils.x86\_64 2.3.0-1.el7 ovirt-4.0-centos-gluster37

nfs-ganesha-vfs.x86\_64 2.3.0-1.el7 ovirt-4.0-centos-gluster37

nfs-ganesha-xfs.x86\_64 2.3.0-1.el7 ovirt-4.0-centos-gluster37

nodectl.noarch 4.0.3-0.20160830.0.el7 ovirt-4.0

novnc.noarch 0.5.1-2.el7 centos-ovirt40-release

nsis-simple-service-plugin.noarch 1.30-1 ovirt-4.0

objenesis.noarch 1.2-18.el7 ovirt-4.0-epel

openvswitch.x86\_64 2.5.0-2.el7 centos-ovirt40-release

openvswitch-devel.x86\_64 2.5.0-2.el7 centos-ovirt40-release

openvswitch-test.noarch 2.5.0-2.el7 centos-ovirt40-release

otopi.noarch 1.5.2-1.el7.centos ovirt-4.0

otopi-debug-plugins.noarch 1.5.2-1.el7.centos ovirt-4.0

otopi-devtools.noarch 1.5.2-1.el7.centos ovirt-4.0

otopi-java.noarch 1.5.2-1.el7.centos ovirt-4.0

otopi-javadoc.noarch 1.5.2-1.el7.centos ovirt-4.0

ovirt-engine.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-appliance.noarch 4.0-20160928.1.el7.centos ovirt-4.0

ovirt-engine-backend.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-cli.noarch 3.6.8.1-1.el7.centos ovirt-4.0

ovirt-engine-dashboard.noarch 1.0.3-1.el7.centos ovirt-4.0

ovirt-engine-dbscripts.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-dwh.noarch 4.0.2-1.el7.centos ovirt-4.0

ovirt-engine-dwh-setup.noarch 4.0.2-1.el7.centos ovirt-4.0

ovirt-engine-extension-aaa-jdbc.noarch 1.1.0-1.el7 ovirt-4.0

ovirt-engine-extension-aaa-ldap.noarch 1.2.1-1.el7 ovirt-4.0

ovirt-engine-extension-aaa-ldap-setup.noarch

1.2.1-1.el7 ovirt-4.0

ovirt-engine-extension-aaa-misc.noarch 1.0.1-1.el7 ovirt-4.0

ovirt-engine-extension-logger-log4j.noarch 1.0.2-1.el7 ovirt-4.0

ovirt-engine-extensions-api-impl.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-extensions-api-impl-javadoc.noarch

4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-lib.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-nodejs.x86\_64 4.4.6-1.el7 ovirt-4.0

ovirt-engine-nodejs-modules.x86\_64 0.0.12-1.el7 ovirt-4.0

ovirt-engine-restapi.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-sdk-java.noarch 3.6.8.0-1.el7 centos-ovirt40-release

ovirt-engine-sdk-java-javadoc.noarch 3.6.8.0-1.el7 centos-ovirt40-release

ovirt-engine-sdk-python.noarch 3.6.9.1-1.el7.centos ovirt-4.0

ovirt-engine-setup.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-setup-base.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-setup-plugin-dockerc.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-setup-plugin-live.noarch 4.0.0-1.el7.centos ovirt-4.0

ovirt-engine-setup-plugin-ovirt-engine.noarch

4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-setup-plugin-ovirt-engine-common.noarch

4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-setup-plugin-vmconsole-proxy-helper.noarch

4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-setup-plugin-websocket-proxy.noarch

4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-tools.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-tools-backup.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-userportal.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-userportal-debuginfo.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-vmconsole-proxy-helper.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-webadmin-portal.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-webadmin-portal-debuginfo.noarch

4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-websocket-proxy.noarch 4.0.4.4-1.el7.centos ovirt-4.0

ovirt-engine-wildfly.x86\_64 10.0.0-1.el7 ovirt-4.0

ovirt-engine-wildfly-overlay.noarch 10.0.0-1.el7 ovirt-4.0

ovirt-guest-agent-common.noarch 1.0.12-3.el7 ovirt-4.0-epel

ovirt-guest-agent-gdm-plugin.noarch 1.0.12-3.el7 ovirt-4.0-epel

ovirt-guest-agent-pam-module.x86\_64 1.0.12-3.el7 ovirt-4.0-epel

ovirt-guest-tools-iso.noarch 4.0-1.fc23 ovirt-4.0

ovirt-host-deploy.noarch 1.5.2-1.el7.centos ovirt-4.0

ovirt-host-deploy-java.noarch 1.5.2-1.el7.centos ovirt-4.0

ovirt-host-deploy-javadoc.noarch 1.5.2-1.el7.centos ovirt-4.0

ovirt-hosted-engine-ha.noarch 2.0.4-1.el7.centos ovirt-4.0

ovirt-hosted-engine-setup.noarch 2.0.2.2-1.el7.centos ovirt-4.0

ovirt-image-uploader.noarch 4.0.1-1.el7.centos ovirt-4.0

ovirt-imageio-common.noarch 0.4.0-1.el7 centos-ovirt40-release

ovirt-imageio-daemon.noarch 0.4.0-1.el7 centos-ovirt40-release

ovirt-imageio-proxy.noarch 0.4.0-0.201608310602.gita9b573b.el7.centos

ovirt-4.0

ovirt-imageio-proxy-setup.noarch 0.4.0-0.201608310602.gita9b573b.el7.centos

ovirt-4.0

ovirt-iso-uploader.noarch 4.0.1-1.el7.centos ovirt-4.0

ovirt-live-artwork.noarch 1.1.0-1.el7.centos ovirt-4.0

ovirt-live-artwork-gnome.noarch 1.1.0-1.el7.centos ovirt-4.0

ovirt-live-artwork-mate.noarch 1.1.0-1.el7.centos ovirt-4.0

ovirt-log-collector.noarch 4.0.1-1.el7.centos ovirt-4.0

ovirt-node-ng-docs.noarch 4.0.4-0.20160928.0.el7 ovirt-4.0

ovirt-node-ng-image.noarch 4.0.3-1.el7 ovirt-4.0

ovirt-node-ng-image-update.noarch 4.0.3-1.el7 ovirt-4.0

ovirt-node-ng-image-update-placeholder.noarch

4.0.3-1.el7 ovirt-4.0

ovirt-node-ng-nodectl.noarch 4.0.4-0.20160928.0.el7 ovirt-4.0

ovirt-node-ng-tools.noarch 4.0.4-0.20160928.0.el7 ovirt-4.0

ovirt-optimizer.noarch 0.11-1.el7.centos ovirt-4.0

ovirt-optimizer-dependencies.noarch 0.11-1.el7.centos ovirt-4.0

ovirt-optimizer-jboss.noarch 0.11-1.el7.centos ovirt-4.0

ovirt-optimizer-ui.noarch 0.11-1.el7.centos ovirt-4.0

ovirt-release-host-node.noarch 4.0.4-1.el7 ovirt-4.0

ovirt-release40-pre.noarch 4.0.4-1 ovirt-4.0

ovirt-release40-snapshot.noarch 4.0.4-1 ovirt-4.0

ovirt-scheduler-proxy.noarch 0.1.6.0.4.ge6e07c5-1.el7.centos

ovirt-4.0

ovirt-setup-lib.noarch 1.0.2-1.el7.centos ovirt-4.0

ovirt-vmconsole.noarch 1.0.4-1.el7.centos ovirt-4.0

ovirt-vmconsole-host.noarch 1.0.4-1.el7.centos ovirt-4.0

ovirt-vmconsole-proxy.noarch 1.0.4-1.el7.centos ovirt-4.0

patternfly1.noarch 1.3.0-1.el7.centos ovirt-4.0-patternfly1-noarch-epel

puppet.noarch 3.6.2-3.el7 ovirt-4.0-epel

py2exe-py2.7.noarch 0.6.9-2.fc23 ovirt-4.0

python-cpopen.x86\_64 1.5-1.el7 ovirt-4.0-epel

python-daemon.noarch 1.6-4.el7 ovirt-4.0-epel

python-gluster.noarch 3.7.16-1.el7 ovirt-4.0-centos-gluster37

python-ioprocess.noarch 0.16.1-1.el7 ovirt-4.0

python-openvswitch.noarch 2.5.0-2.el7 centos-ovirt40-release

python-ordereddict.noarch 1.1-6.el7 ovirt-4.0-epel

python-ovirt-engine-sdk4.x86\_64 4.0.1-1.el7.centos ovirt-4.0

python-ovirt-engine-sdk4-debuginfo.x86\_64 4.0.1-1.el7.centos ovirt-4.0

python-pthreading.noarch 0.1.3-3.el7 ovirt-4.0-epel

python-subprocess32.x86\_64 3.2.6-4.1.el7 centos-ovirt40-release

python-websockify.noarch 0.8.0-1.el7 centos-ovirt40-release

python-windows.noarch 2.7.8-2.fc23 ovirt-4.0

python2-crypto.x86\_64 2.6.1-9.el7 ovirt-4.0-epel

python2-ecdsa.noarch 0.13-4.el7 ovirt-4.0-epel

python2-paramiko.noarch 1.16.1-1.el7 ovirt-4.0-epel

python34.x86\_64 3.4.3-7.el7 ovirt-4.0-epel

python34-Cython.x86\_64 0.23.5-1.el7 ovirt-4.0-epel

python34-PyYAML.x86\_64 3.11-2.el7 ovirt-4.0-epel

python34-apsw.x86\_64 3.7.17.r1-3.el7 ovirt-4.0-epel

python34-arrow.noarch 0.8.0-3.el7 ovirt-4.0-epel

python34-attrs.noarch 16.1.0-1.el7 ovirt-4.0-epel

ovirt-4.0-epel

python34-backports\_abc.noarch 0.4-3.el7 ovirt-4.0-epel

python34-bitarray.x86\_64 0.8.1-4.el7 ovirt-4.0-epel

python34-bottle.noarch 0.12.9-1.el7 ovirt-4.0-epel

python34-breathe.noarch 4.2.0-3.el7 ovirt-4.0-epel

python34-chai.noarch 1.1.1-4.el7 ovirt-4.0-epel

python34-chardet.noarch 2.3.0-3.el7 ovirt-4.0-epel

python34-contextlib2.noarch 0.5.1-2.el7 ovirt-4.0-epel

python34-coverage.x86\_64 4.0.3-3.el7 ovirt-4.0-epel

python34-crypto.x86\_64 2.6.1-9.el7 ovirt-4.0-epel

python34-cytoolz.x86\_64 0.7.5-1.el7 ovirt-4.0-epel

python34-dateutil.noarch 1:2.4.2-3.el7 ovirt-4.0-epel

python34-debug.x86\_64 3.4.3-7.el7 ovirt-4.0-epel

python34-devel.x86\_64 3.4.3-7.el7 ovirt-4.0-epel

python34-ecdsa.noarch 0.13-4.el7 ovirt-4.0-epel

python34-ivi.noarch 0.14.9-6.el7 ovirt-4.0-epel

python34-libs.x86\_64 3.4.3-7.el7 ovirt-4.0-epel

python34-llfuse.x86\_64 1.0-1.el7 ovirt-4.0-epel

python34-mock.noarch 1.0.1-9.el7 ovirt-4.0-epel

python34-msgpack.x86\_64 0.4.8-1.el7 ovirt-4.0-epel

python34-nose.noarch 1.3.7-2.el7 ovirt-4.0-epel

python34-numexpr.x86\_64 2.5.2-2.el7 ovirt-4.0-epel

python34-numpy.x86\_64 1.10.4-4.el7 ovirt-4.0-epel

python34-numpy-f2py.x86\_64 1.10.4-4.el7 ovirt-4.0-epel

python34-paramiko.noarch 1.16.1-1.el7 ovirt-4.0-epel

python34-pdfminer.six.noarch 20160614-3.el7 ovirt-4.0-epel

python34-pg8000.noarch 1.10.5-1.el7 ovirt-4.0-epel

python34-pika.noarch 0.10.0-5.el7 ovirt-4.0-epel

python34-pika-doc.noarch 0.10.0-5.el7 ovirt-4.0-epel

python34-py.noarch 1.4.30-2.el7 ovirt-4.0-epel

python34-pycosat.x86\_64 0.6.1-7.el7 ovirt-4.0-epel

python34-pysocks.noarch 1.5.7-1.el7 ovirt-4.0-epel

python34-pytest.noarch 2.8.5-2.el7 ovirt-4.0-epel

python34-pytest-catchlog.noarch 1.2.2-2.el7 ovirt-4.0-epel

python34-pytg.noarch 0.4.10-1.el7 ovirt-4.0-epel

python34-scandir.x86\_64 1.3-1.el7 ovirt-4.0-epel

python34-setuptools.noarch 19.2-3.el7 ovirt-4.0-epel

python34-setuptools\_scm.noarch 1.10.1-2.el7 ovirt-4.0-epel

python34-simplepath.noarch 0.3.3-1.el7 ovirt-4.0-epel

python34-six.noarch 1.10.0-1.el7 ovirt-4.0-epel

python34-sphinx-autobuild.noarch 0.6.0-3.el7 ovirt-4.0-epel

python34-sphinx-theme-alabaster.noarch 0.7.9-1.el7 ovirt-4.0-epel

python34-spur.noarch 0.3.17-1.el7 ovirt-4.0-epel

python34-test.x86\_64 3.4.3-7.el7 ovirt-4.0-epel

python34-tinydb.noarch 3.2.1-1.el7 ovirt-4.0-epel

python34-tkinter.x86\_64 3.4.3-7.el7 ovirt-4.0-epel

python34-tools.x86\_64 3.4.3-7.el7 ovirt-4.0-epel

python34-toolz.noarch 0.7.4-1.el7 ovirt-4.0-epel

python34-unidiff.noarch 0.5.2-3.el7 ovirt-4.0-epel

python34-vxi11.noarch 0.8-5.el7 ovirt-4.0-epel

python34-wrapt.x86\_64 1.10.4-7.el7 ovirt-4.0-epel

pywin32-py2.7.noarch 219-2.fc23 ovirt-4.0

qemu-img-ev.x86\_64 10:2.3.0-31.el7.16.1 ovirt-4.0

qemu-kvm-common-ev.x86\_64 10:2.3.0-31.el7.16.1 ovirt-4.0

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qemu-kvm-ev-debuginfo.x86\_64 10:2.3.0-31.el7.16.1 ovirt-4.0

qemu-kvm-tools-ev.x86\_64 10:2.3.0-31.el7.16.1 ovirt-4.0

rubygem-ovirt-engine-sdk4.x86\_64 4.0.1-1.el7.centos ovirt-4.0

rubygem-ovirt-engine-sdk4-debuginfo.x86\_64 4.0.1-1.el7.centos ovirt-4.0

rubygem-ovirt-engine-sdk4-doc.x86\_64 4.0.1-1.el7.centos ovirt-4.0

rubygem-rgen.noarch 0.6.6-2.el7 ovirt-4.0-epel

safelease.x86\_64 1.0-7.el7 centos-ovirt40-release

spice-html5.noarch 0.1.7-1.el7 ovirt-4.0-epel

unboundid-ldapsdk.noarch 3.0.0-1.el7 centos-ovirt40-release

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userspace-rcu.x86\_64 0.7.16-2.el7 ovirt-4.0-centos-gluster37

userspace-rcu-devel.x86\_64 0.7.16-2.el7 ovirt-4.0-centos-gluster37

vcredist-x86.noarch 2008.sp1-2.fc23 ovirt-4.0

vdsm.x86\_64 4.18.13-1.el7.centos ovirt-4.0

vdsm-api.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-cli.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-gluster.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-hook-allocate\_net.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-hook-checkimages.noarch 4.18.13-1.el7.centos ovirt-4.0

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vdsm-hook-fakesriov.x86\_64 4.18.13-1.el7.centos ovirt-4.0

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vdsm-hook-isolatedprivatevlan.noarch 4.18.13-1.el7.centos ovirt-4.0

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vdsm-hook-numa.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-hook-openstacknet.noarch 4.18.13-1.el7.centos ovirt-4.0

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vdsm-hook-qos.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-hook-scratchpad.noarch 4.18.13-1.el7.centos ovirt-4.0

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vdsm-hook-spiceoptions.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-hook-vhostmd.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-hook-vmdisk.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-hook-vmfex.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-hook-vmfex-dev.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-infra.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-jsonrpc.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-jsonrpc-java.noarch 1.2.5-1.el7.centos ovirt-4.0

vdsm-jsonrpc-java-javadoc.noarch 1.2.5-1.el7.centos ovirt-4.0

vdsm-python.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-tests.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-xmlrpc.noarch 4.18.13-1.el7.centos ovirt-4.0

vdsm-yajsonrpc.noarch 4.18.13-1.el7.centos ovirt-4.0

vhostmd.x86\_64 0.5-11.el7 ovirt-4.0

vhostmd-debuginfo.x86\_64 0.5-11.el7 ovirt-4.0

vm-dump-metrics.x86\_64 0.5-11.el7 ovirt-4.0

vm-dump-metrics-devel.x86\_64 0.5-11.el7 ovirt-4.0

## 实验环境中安装的包

Installed:

ovirt-engine.noarch 0:4.0.4.4-1.el7.centos

Dependency Installed:

ant.noarch 0:1.9.2-9.el7

antlr-tool.noarch 0:2.7.7-30.el7

aopalliance.noarch 0:1.0-8.el7

apache-commons-beanutils.noarch 0:1.8.3-14.el7

apache-commons-codec.noarch 0:1.8-7.el7

apache-commons-collections.noarch 0:3.2.1-22.el7\_2

apache-commons-compress.noarch 0:1.5-4.el7

apache-commons-configuration.noarch 0:1.9-8.el7

apache-commons-digester.noarch 0:1.8.1-19.el7

apache-commons-io.noarch 1:2.4-12.el7

apache-commons-jexl.noarch 0:2.1.1-9.el7

apache-commons-jxpath.noarch 0:1.3-20.el7

apache-commons-lang.noarch 0:2.6-15.el7

apache-commons-logging.noarch 0:1.1.2-7.el7

apache-commons-net.noarch 0:3.2-8.el7.centos

apache-commons-vfs.noarch 0:2.0-11.el7

apr-util.x86\_64 0:1.5.2-6.el7

apr.x86\_64 0:1.4.8-3.el7

atk.x86\_64 0:2.14.0-1.el7

atlas.x86\_64 0:3.10.1-10.el7

audit-libs-python.x86\_64 0:2.4.1-5.el7

avalon-framework.noarch 0:4.3-10.el7

avalon-logkit.noarch 0:2.1-14.el7

batik.noarch 0:1.8-0.12.svn1230816.el7

bea-stax-api.noarch 0:1.2.0-9.el7

bea-stax.noarch 0:1.2.0-9.el7

blas.x86\_64 0:3.4.2-5.el7

cairo.x86\_64 0:1.14.2-1.el7

cal10n.noarch 0:0.7.7-4.el7

checkpolicy.x86\_64 0:2.1.12-6.el7

color-filesystem.noarch 0:1-13.el7

cracklib-python.x86\_64 0:2.9.0-11.el7

cups-libs.x86\_64 1:1.6.3-22.el7

dom4j.noarch 0:1.6.1-20.el7

easymock2.noarch 0:2.5.2-12.el7

ebay-cors-filter.noarch 0:1.0.1-3.el7

flac-libs.x86\_64 0:1.3.0-5.el7\_1

fontconfig.x86\_64 0:2.10.95-7.el7

fontpackages-filesystem.noarch 0:1.44-8.el7

fop.noarch 0:1.1-6.el7

GConf2.x86\_64 0:3.2.6-8.el7

geronimo-jms.noarch 0:1.1.1-19.el7

giflib.x86\_64 0:4.1.6-9.el7

graphite2.x86\_64 0:1.3.6-1.el7\_2

gsm.x86\_64 0:1.0.13-11.el7

gssproxy.x86\_64 0:0.4.1-8.el7\_2

gtk2.x86\_64 0:2.24.28-8.el7

hamcrest.noarch 0:1.3-6.el7

harfbuzz.x86\_64 0:0.9.36-1.el7

hicolor-icon-theme.noarch 0:0.12-7.el7

hsqldb.noarch 1:1.8.1.3-13.el7

httpd-tools.x86\_64 0:2.4.6-40.el7.centos.4

httpd.x86\_64 0:2.4.6-40.el7.centos.4

icc-profiles-openicc.noarch 0:1.3.1-5.el7

isorelax.noarch 1:0-0.15.release20050331.el7

jackson.noarch 0:1.9.4-7.el7

jai-imageio-core.noarch 0:1.2-0.14.20100217cvs.el7

jakarta-commons-httpclient.noarch 1:3.1-16.el7\_0

java-1.7.0-openjdk-devel.x86\_64 1:1.7.0.111-2.6.7.2.el7\_2

java-1.7.0-openjdk-headless.x86\_64 1:1.7.0.111-2.6.7.2.el7\_2

java-1.7.0-openjdk.x86\_64 1:1.7.0.111-2.6.7.2.el7\_2

java-1.8.0-openjdk-headless.x86\_64 1:1.8.0.111-1.b15.el7\_2

java-1.8.0-openjdk.x86\_64 1:1.8.0.111-1.b15.el7\_2

javamail.noarch 0:1.4.6-8.el7

javapackages-tools.noarch 0:3.4.1-11.el7

javassist.noarch 0:3.16.1-10.el7

jaxen.noarch 0:1.1.3-11.el7

jdom.noarch 0:1.1.3-6.el7

jline.noarch 0:1.0-8.el7

joda-convert.noarch 0:1.3-5.el7

joda-time.noarch 0:2.2-3.tzdata2013c.el7

jsch.noarch 0:0.1.50-5.el7

jsr-311.noarch 0:1.1.1-6.el7

junit.noarch 0:4.11-8.el7

jzlib.noarch 0:1.1.1-6.el7

keyutils.x86\_64 0:1.5.8-3.el7

lapack.x86\_64 0:3.4.2-5.el7

libICE.x86\_64 0:1.0.9-2.el7

libSM.x86\_64 0:1.2.2-2.el7

libXcomposite.x86\_64 0:0.4.4-4.1.el7

libXcursor.x86\_64 0:1.1.14-2.1.el7

libXdamage.x86\_64 0:1.1.4-4.1.el7

libXfont.x86\_64 0:1.5.1-2.el7

libXft.x86\_64 0:2.3.2-2.el7

libXi.x86\_64 0:1.7.4-2.el7

libXtst.x86\_64 0:1.2.2-2.1.el7

libXxf86vm.x86\_64 0:1.1.3-2.1.el7

libasyncns.x86\_64 0:0.8-7.el7

libbasicobjects.x86\_64 0:0.1.1-25.el7

libcgroup.x86\_64 0:0.41-8.el7

libcollection.x86\_64 0:0.6.2-25.el7

libevent.x86\_64 0:2.0.21-4.el7

libfontenc.x86\_64 0:1.1.2-3.el7

libgfortran.x86\_64 0:4.8.5-4.el7

libini\_config.x86\_64 0:1.2.0-25.el7

libnfsidmap.x86\_64 0:0.25-12.el7

libogg.x86\_64 2:1.3.0-7.el7

libpath\_utils.x86\_64 0:0.2.1-25.el7

libquadmath.x86\_64 0:4.8.5-4.el7

libref\_array.x86\_64 0:0.1.5-25.el7

libsemanage-python.x86\_64 0:2.1.10-18.el7

libsndfile.x86\_64 0:1.0.25-10.el7

libtalloc.x86\_64 0:2.1.5-1.el7\_2

libtevent.x86\_64 0:0.9.26-1.el7\_2.1

libthai.x86\_64 0:0.1.14-9.el7

libtirpc.x86\_64 0:0.2.4-0.6.el7

libtomcrypt.x86\_64 0:1.17-23.el7

libtommath.x86\_64 0:0.42.0-4.el7

libverto-tevent.x86\_64 0:0.2.5-4.el7

libvorbis.x86\_64 1:1.3.3-8.el7

libxshmfence.x86\_64 0:1.2-1.el7

libxslt.x86\_64 0:1.1.28-5.el7

lksctp-tools.x86\_64 0:1.0.13-3.el7

log4j.noarch 0:1.2.17-15.el7

m2crypto.x86\_64 0:0.21.1-17.el7

mailcap.noarch 0:2.1.41-2.el7

mesa-libEGL.x86\_64 0:10.6.5-3.20150824.el7

mesa-libGL.x86\_64 0:10.6.5-3.20150824.el7

mesa-libgbm.x86\_64 0:10.6.5-3.20150824.el7

mesa-libglapi.x86\_64 0:10.6.5-3.20150824.el7

mod\_ssl.x86\_64 1:2.4.6-40.el7.centos.4

msv-msv.noarch 1:2013.5.1-6.el7

msv-xsdlib.noarch 1:2013.5.1-6.el7

nfs-utils.x86\_64 1:1.3.0-0.21.el7\_2.1

novnc.noarch 0:0.5.1-2.el7

numpy.x86\_64 1:1.7.1-11.el7

objectweb-asm.noarch 0:3.3.1-9.el7

otopi-java.noarch 0:1.5.2-1.el7.centos

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ovirt-engine-backend.noarch 0:4.0.4.4-1.el7.centos

ovirt-engine-cli.noarch 0:3.6.8.1-1.el7.centos

ovirt-engine-dashboard.noarch 0:1.0.3-1.el7.centos

ovirt-engine-dbscripts.noarch 0:4.0.4.4-1.el7.centos

ovirt-engine-dwh-setup.noarch 0:4.0.2-1.el7.centos

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ovirt-engine-extension-aaa-jdbc.noarch 0:1.1.0-1.el7

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ovirt-engine-sdk-python.noarch 0:3.6.9.1-1.el7.centos

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ovirt-engine-setup-plugin-ovirt-engine.noarch 0:4.0.4.4-1.el7.centos

ovirt-engine-setup-plugin-vmconsole-proxy-helper.noarch 0:4.0.4.4-1.el7.centos

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ovirt-engine-tools.noarch 0:4.0.4.4-1.el7.centos

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pcsc-lite-libs.x86\_64 0:1.8.8-6.el7

pixman.x86\_64 0:0.32.6-3.el7

policycoreutils-python.x86\_64 0:2.2.5-20.el7

postgresql-jdbc.noarch 0:9.2.1002-5.el7

postgresql-libs.x86\_64 0:9.2.15-1.el7\_2

postgresql-server.x86\_64 0:9.2.15-1.el7\_2

postgresql.x86\_64 0:9.2.15-1.el7\_2

psmisc.x86\_64 0:22.20-9.el7

pulseaudio-libs.x86\_64 0:6.0-7.el7

python-IPy.noarch 0:0.75-6.el7

python-babel.noarch 0:0.9.6-8.el7

python-backports-ssl\_match\_hostname.noarch 0:3.4.0.2-4.el7

python-backports.x86\_64 0:1.0-8.el7

python-daemon.noarch 0:1.6-4.el7

python-enum34.noarch 0:1.0.4-1.el7

python-javapackages.noarch 0:3.4.1-11.el7

python-jinja2.noarch 0:2.7.2-2.el7

python-lockfile.noarch 1:0.9.1-4.el7.centos

python-lxml.x86\_64 0:3.2.1-4.el7

python-markupsafe.x86\_64 0:0.11-10.el7

python-nose.noarch 0:1.3.0-3.el7

python-ovirt-engine-sdk4.x86\_64 0:4.0.1-1.el7.centos

python-ply.noarch 0:3.4-10.el7

python-psycopg2.x86\_64 0:2.5.1-3.el7

python-requests.noarch 0:2.6.0-1.el7\_1

python-setuptools.noarch 0:0.9.8-4.el7

python-urllib3.noarch 0:1.10.2-2.el7\_1

python-webob.noarch 0:1.2.3-6.el7

python-websockify.noarch 0:0.8.0-1.el7

python2-crypto.x86\_64 0:2.6.1-9.el7

python2-ecdsa.noarch 0:0.13-4.el7

python2-paramiko.noarch 0:1.16.1-1.el7

qdox.noarch 0:1.12.1-9.el7

relaxngDatatype.noarch 0:1.0-11.el7

rhino.noarch 0:1.7R4-5.el7

rpcbind.x86\_64 0:0.2.0-33.el7\_2.1

sac.noarch 0:1.3-17.el7

setools-libs.x86\_64 0:3.3.7-46.el7

slf4j.noarch 0:1.7.4-3.el7

spice-html5.noarch 0:0.1.7-1.el7

stax2-api.noarch 0:3.1.1-10.el7

tomcat-servlet-3.0-api.noarch 0:7.0.54-8.el7\_2

ttmkfdir.x86\_64 0:3.0.9-42.el7

tzdata-java.noarch 0:2016h-1.el7

vdsm-jsonrpc-java.noarch 0:1.2.5-1.el7.centos

ws-commons-util.noarch 0:1.0.1-29.el7

ws-jaxme.noarch 0:0.5.2-10.el7

xalan-j2.noarch 0:2.7.1-23.el7

xerces-j2.noarch 0:2.11.0-17.el7\_0

xml-commons-apis.noarch 0:1.4.01-16.el7

xml-commons-resolver.noarch 0:1.2-15.el7

xmlgraphics-commons.noarch 0:1.5-3.el7

xmlrpc-client.noarch 1:3.1.3-8.el7

xmlrpc-common.noarch 1:3.1.3-8.el7

xorg-x11-font-utils.x86\_64 1:7.5-20.el7

xorg-x11-fonts-Type1.noarch 0:7.5-9.el7

xpp3.noarch 0:1.1.3.8-11.el7

xz-java.noarch 0:1.3-3.el7

yum-plugin-versionlock.noarch 0:1.1.31-34.el7

## 节点上手工安装

[root@tomkvm2 ~]# yum -y install vdsm

Installed:

kernel.x86\_64 0:3.10.0-327.36.3.el7 qemu-img-ev.x86\_64 10:2.3.0-31.el7.16.1 qemu-kvm-common-ev.x86\_64 10:2.3.0-31.el7.16.1 qemu-kvm-ev.x86\_64 10:2.3.0-31.el7.16.1 vdsm.x86\_64 0:4.18.13-1.el7.centos

Dependency Installed:

NetworkManager-config-server.x86\_64 1:1.0.6-31.el7\_2 PyYAML.x86\_64 0:3.10-11.el7 augeas.x86\_64 0:1.4.0-2.el7 glusterfs-cli.x86\_64 0:3.7.16-1.el7

glusterfs-fuse.x86\_64 0:3.7.16-1.el7 hexedit.x86\_64 0:1.2.13-5.el7 ioprocess.x86\_64 0:0.16.1-1.el7 libguestfs-tools-c.x86\_64 1:1.28.1-1.55.el7.centos.4

libguestfs-winsupport.x86\_64 0:7.2-1.el7 libvirt-lock-sanlock.x86\_64 0:1.2.17-13.el7\_2.5 mom.noarch 0:0.5.6-1.el7 ntp.x86\_64 0:4.2.6p5-22.el7.centos.2

numactl.x86\_64 0:2.0.9-6.el7\_2 openvswitch.x86\_64 0:2.5.0-2.el7 ovirt-imageio-common.noarch 0:0.4.0-1.el7 ovirt-imageio-daemon.noarch 0:0.4.0-1.el7

ovirt-vmconsole.noarch 0:1.0.4-1.el7.centos python-cpopen.x86\_64 0:1.5-1.el7 python-ioprocess.noarch 0:0.16.1-1.el7 python-netaddr.noarch 0:0.7.5-7.el7

python-pthreading.noarch 0:0.1.3-3.el7 python-webob.noarch 0:1.2.3-6.el7 safelease.x86\_64 0:1.0-7.el7 sanlock.x86\_64 0:3.2.4-2.el7\_2

sanlock-lib.x86\_64 0:3.2.4-2.el7\_2 sanlock-python.x86\_64 0:3.2.4-2.el7\_2 tree.x86\_64 0:1.6.0-10.el7 vdsm-api.noarch 0:4.18.13-1.el7.centos

vdsm-hook-vmfex-dev.noarch 0:4.18.13-1.el7.centos vdsm-infra.noarch 0:4.18.13-1.el7.centos vdsm-jsonrpc.noarch 0:4.18.13-1.el7.centos vdsm-python.noarch 0:4.18.13-1.el7.centos

vdsm-xmlrpc.noarch 0:4.18.13-1.el7.centos vdsm-yajsonrpc.noarch 0:4.18.13-1.el7.centos virt-v2v.x86\_64 1:1.28.1-1.55.el7.centos.4

Dependency Updated:

device-mapper.x86\_64 7:1.02.107-5.el7\_2.5 device-mapper-event.x86\_64 7:1.02.107-5.el7\_2.5 device-mapper-event-libs.x86\_64 7:1.02.107-5.el7\_2.5 device-mapper-libs.x86\_64 7:1.02.107-5.el7\_2.5

glusterfs.x86\_64 0:3.7.16-1.el7 glusterfs-api.x86\_64 0:3.7.16-1.el7 glusterfs-client-xlators.x86\_64 0:3.7.16-1.el7 glusterfs-libs.x86\_64 0:3.7.16-1.el7

libguestfs.x86\_64 1:1.28.1-1.55.el7.centos.4 libvirt.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-client.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon.x86\_64 0:1.2.17-13.el7\_2.5

libvirt-daemon-config-network.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon-config-nwfilter.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon-driver-interface.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon-driver-lxc.x86\_64 0:1.2.17-13.el7\_2.5

libvirt-daemon-driver-network.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon-driver-nodedev.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon-driver-nwfilter.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon-driver-qemu.x86\_64 0:1.2.17-13.el7\_2.5

libvirt-daemon-driver-secret.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon-driver-storage.x86\_64 0:1.2.17-13.el7\_2.5 libvirt-daemon-kvm.x86\_64 0:1.2.17-13.el7\_2.5 lvm2.x86\_64 7:2.02.130-5.el7\_2.5

lvm2-libs.x86\_64 7:2.02.130-5.el7\_2.5 ntpdate.x86\_64 0:4.2.6p5-22.el7.centos.2

Replaced:

qemu-img.x86\_64 10:1.5.3-105.el7 qemu-kvm.x86\_64 10:1.5.3-105.el7 qemu-kvm-common.x86\_64 10:1.5.3-105.el7

Complete!